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Educational News and Editorial Comment

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On the Permanence of Wartime Changes

For nearly a year and a half most of the secondary schools have been trying to maximize their contribution to the war effort. They have reorganized some courses and have offered entirely new ones, including various types of pre-induction work. They have established the High School Victory Corps, sold war bonds and stamps, assisted in the rationing program, and aided in many other ways. At first, uncertainty and confusion were everywhere, for which the schools themselves were responsible only in part. Now, however, the confusion seems to be abating, and there are indications that a second phase is at hand. Critical or evaluative activities, which were, of necessity, partially suppressed during the initial stages of reorientation, are now receiving more attention. Perhaps it is not too early to begin speculating on the possible permanence of some of the recent innovations.

Pre-flight aeronautics Prominent among the new courses are those in pre-flight aeronautics. The *California Journal of Secondary Education* for January, 1943, which contains nine short articles related to this subject, states the situation as follows:

> Nothing ever before has happened in secondary education quite like the present all-out effort to make aviation-conscious the high-school youth of America. Almost over night, thousands and thousands of pre-flight courses have sprung up in high schools all over the country. New texts and teaching materials have appeared almost by magic. Teachers have prepared themselves to teach new courses, and they have revised old courses to use aviation as motivation and as a center of interest. Already an unbelievably large number of boys and girls are enrolled in these classes, and it is predicted that within the next few years we will be giving pre-flight instruction to most of the boys in our high schools.

The nine articles by California educators and one Harvard professor contain much of interest to teachers and administrators who have recently in-

troduced pre-flight courses. For the most part, however, they report what is being done and do not attempt to make a serious evaluation of the work.

More symptomatic of the arrival of the critical stage is a document, "Recommendation for a Careful Evaluation Study of Pre-flight Aeronautics Instruction in Secondary Schools as a Basis for the Improvement and Expansion of This Phase of Aviation Education," which was prepared by a group of Nebraska teachers and administrators under the chairmanship of Frank E. Sorenson, of the State Department of Public Instruction, for submission to the Civil Aeronautics Administration. The following quotations are representative of the spirit of the discussion.

> Is pre-flight aeronautics to be a permanent addition to the curriculum of the American secondary school? Suppose the war ends in 1943 and the stimulus to offer pre-flight aeronautics and to encourage the enrolment of students for military reasons is removed? What would happen to pre-flight aeronautics?
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> Is it not possible that pre-flight aeronautics might drop out of the curriculum in just about as short a time as it has taken to put it in? Many schools view this new course as one offering specialized preparation primarily for entering the armed services and that as soon as the war is over the traditional physics course should replace it. Whether pre-flight aeronautics is likely to survive and maintain the position which it has achieved in the secondary-school program or to make further expansion will depend upon what is done. . . . .
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> In the opinion of this group, after careful study of the problem, the future of the pre-flight course will be determined by the adequacy of the textbooks, the adequacy of teachers, and the number of teachers and administrators who become and remain convinced that the course is of sufficient general value that it deserves a permanent place in the high-school program. . . . .
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> There are four general areas within which careful studies should be made: (1) enrolment; (2) instructional materials; (3) instruction and teacher preparation; and (4) follow-up. No attempt has been made to refine the statement of the problems to be suggested to the end that the analysis of the situation may be regarded as completed and all significant problems identified and stated in form ready for immediate attack. Neither has an attempt been made to suggest how the studies should be conducted. Rather an attempt has been made to identify some of the problems which, in the opinion of the group, should be called to the attention of the Civil Aeronautics Administration with recommendations that they be carefully studied.

Under the heading of "Follow-up Studies," the problems suggested for investigation are stated as follows:

> Is the completion of certain prerequisite courses essential to the successful study of pre-flight aeronautics? If so, what are they? Should girls, as well as boys, be encouraged to enrol in pre-flight aeronautics? What happens to students after they have completed the course? How many go into military service? Into industry? What is the relationship of sex, age, intelligence to achievement in the course? What is the attitude of students, parents, and educators toward the course? For what reasons do students drop out of the course?

The document clearly reveals the hope of this group of educators that factual data rather than assumption, opinion, and prejudice may form the basis of the solution to some of the instructional problems of this new and specialized course. Although the recommendations were submitted to the

Civil Aeronautics Administration, apparently in the hope that this government agency would assume responsibility for the development of an evaluation project, some of the problems are of a sort which individual schools might well start to investigate. Intelligent guidance in this field, as in any other, will, in the last analysis, depend on data which are known to be applicable to the local situation.

It seems reasonably certain that some of the wartime developments in education are definitely temporary. In spite of the prediction that an enormous expansion of commercial aviation waits only on the close of the war, the survival of pre-flight aeronautics as a *course* in most secondary schools may be questioned. It will depend not only on such factors as the number of students in a school but also on the continuance or the abandonment of compulsory military training for boys. Parts of the present pre-flight curriculum may readily be incorporated in less specialized courses in science and mathematics. Some topics now often included, such as learning from a book how a plane is handled in certain maneuvers, may well be postponed until actual flight instruction is available.

Changes within courses

Other wartime developments, however, give promise of ultimately bringing about marked changes in curriculum and methods. For example, the war has doubtless accelerated the reorientation of instruction in geography which has long been under way. Also it is said that short periods of instruction in foreign languages given by means of phonograph records have been effective in enabling men in the Army and the Navy to converse with the natives of invaded territory, and other modified procedures shorten the time required to learn the written language. Under pressure for time, the traditional emphasis on certain content in mathematics and science is being modified, particularly in the various pre-induction courses. In a brief discussion of "High School War Courses," appearing in *The Public and the Schools* published by the Public Education Association of New York City, Frederic Ernst, associate superintendent of schools in that city, comments as follows:

> The interest shown by the pupils who are taking these courses has profoundly influenced the point of view of high-school supervisors and administrators. Their introduction will, no doubt, give impetus to the movement of making the academic high-school curriculum much more practical than it has been in the past. Many of us must admit that this change has been all too long delayed. The academic tradition is still too strong in our high schools. In too many places, the college-preparatory objective still dominates the curriculum in spite of the fact, which we all know, that most of our boys and girls are not going to college. Out of this situation then, forced on us by the necessities of the defense program, will certainly come very radical curriculum modifications.

Attention may be called to an important report on "Pre-induction Courses in Mathematics" prepared under the auspices of the United States Office of Education and the Na-

tional Council of Teachers of Mathematics. This report, which was approved by various other groups, including the War and Navy Departments and the Civil Aeronautics Administration, is published in the *Mathematics Teacher* for March, 1943. The document renders authoritative for the emergency certain recommendations which have been made previously by individuals and by other committees. Recognizing that some teachers have interpreted the recent demands for better training in mathematics as equivalent to "more drill on the fundamentals" (which usually means on the manipulative aspects), the report states:

> Mathematics learned as mechanical manipulation only cannot have its fullest value either in the immediate emergency or in future civilian life.
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> The type of subject matter, the time element in teaching, and the number of practice exercises must be so selected and modified that a maximum of understanding is secured. Accuracy and skill in application must be a main consideration, not the amount of material covered. . . . .
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> Some modifications in content of the sequential courses are advisable both for the war emergency and for future civilian uses. The mathematics taught should be practical to the extent that it has immediate application, that it is needed for other essential mathematics, sciences, or other advanced courses, or that it pertains directly to the war effort. The immediate needs for war service should be met by reduction in the amount of less important material and the substitution of material which is more essential.

In the process of outlining recommendations for both special courses and the so-called "sequential courses," the committee repeatedly points out desirable reductions in emphasis. One such passage will serve as illustration.

> Modifications in content to permit of more careful teaching and of the introduction of practical applications are possible. If an attempt is made to cover too much material, pupils will not receive sufficient practice to secure reasonable mastery of the subject.
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> Suggestions for modification follow:
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> *Algebra.*—Reduce the amount of time spent on special products and factoring, on complex fractions, on fractions with other than monomial denominators, on equations containing such fractions, and on complex work in radicals.
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> Increase the amount of time spent on fundamentals of arithmetic, numerical trigonometry, on the use of practical formulas in industry, aeronautics, and science, and in the solution of practical problems in those branches.

This report is noteworthy because of the restraint that has been exercised in outlining content. It may be that, when the war is finally won and the inevitable reaction against mathematics begins, the time saved through elimination of nonfunctional content as a war measure may be used for increased emphasis on nonmilitary applications of mathematics.

Thus in varied ways the path may be cleared for more rapid progress in curriculum reorganization after the war. It is possible, however, that methods of instruction, particularly in the case of science and mathematics, may be set in certain fixed and rather questionable patterns. The work in many courses under the more or less direct supervision of the armed serv-

ices is outlined in terms of content to be covered on an hour-by-hour schedule. There is relatively little opportunity to adjust to individual differences. Methods of presentation, of preparing examinations, scoring the papers, and reporting the results virtually ignore certain basic principles which have long been known and practiced by superior teachers in the secondary schools. It would be unfortunate if, because of misguided efforts to accustom boys and girls to the kind of instruction that they may eventually receive in the services, there should be a retrogression to outmoded methods in the schools.

Testing programs One of the educational developments which give most promise of having long-term effects is the testing program of the United States Armed Forces Institute. Under the two plans which were described in this section of the October, 1942, issue of the *School Review*, the Institute provides correspondence instruction to persons in all branches of the armed services. In a recently published pamphlet, *Sound Educational Credit for Military Experience*, issued by the American Council on Education, these plans are summarized, and a description is given of the testing programs which are being developed to avoid the situation which arose at the close of the last war, when many institutions granted "blanket" credit for military experience without data on the educational growth of the men returning from the services. The Examinations Staff of the Institute, under the direction of Professor Ralph W. Tyler, of the University of Chicago, has the responsibility of preparing examinations by which the members of the armed forces may demonstrate competence of various types. In the words of the pamphlet referred to above:

> The Institute's testing program, which was begun chiefly for the purpose of measuring achievement in its own courses, was extended to include measurement of all educational experience in the armed forces, with the objective of assisting schools and colleges at the time of readmission.

Many features of the program are worthy of extended comment, but only three will be discussed here.

In the first place, there is the recognition of the desirability and "the possibility, through the techniques developed by American education in the last twenty years, of a far more discriminating evaluation of the educational benefits of military service than was possible at the close of the last war." This evaluation is to provide not only for the award of credit for military training and for work in special fields but also for evidence relative to general educational placement. The three-point program is described in the pamphlet in the following terms.

> (1) *Credit for Military Training.*—Institutions which allow credit for R.O.T.C., physical training, hygiene, or free electives may well consider granting direct credit, in these terms, for military training, in proportion to the length and extent of military service and without further examination; not to exceed, however, the total amount of credit available in these fields. (For most indi-

viduals this will presumably not exceed one-half semester college credit or one semester high-school credit.)

(2) *General Educational Placement.*—At the time the individual is discharged from the armed forces, the Army Institute will make available to the educational institutions a "competence profile" of the returning service man (or woman), including his full military and previous educational record and also his Army Classification score and his scores in a battery of tests of general educational competence; to enable the school or college to effect an appropriate educational placement of the applicant in terms of his indicated educational maturity and the extent to which he has met the general educational requirements of the school or college.

(3) *Credit in Special Fields.*—On the basis both of his general record and his achievement in the competence level battery, the returning student will be tested further in fields of special competence or training; and upon the scores of these detailed tests, which will also be supplied by the Army Institute, the receiving institution will be able to determine in terms of its own curricula what specific credit the candidate is entitled to receive in any special fields or subjects; and, as well, to plan and recommend a program of study for him.

A second interesting feature of the program has to do with the types of tests being used for the measurement of general educational development. These tests include the kinds of exercises in the subject fields which have proved to be good predictors of further success in these fields yet which are relatively independent of the specialized knowledge and abilities developed in particular courses and measured in the usual achievement test. The items in science, social science, and literature are presented in the form of reading and interpretation exercises. Calling for the ability to analyze and synthesize the materials presented, they require a good basic knowledge and vocabulary in the field but do not depend on the specifics associated with usual course examinations in the field.

A third feature of the program is the fact that the tests yield part scores which should be of definite value in the guidance or placement of the individual. Moreover, according to the pamphlet mentioned above:

> Upon request of any institution, the Armed Forces Institute is preparing to supply specimen copies of alternative forms of all the tests it employs, so that the institution may calibrate them in terms of its own enrolment and curriculum, and by this means establish its own norms. Once this is done, the applicant's "raw scores" may be directly interpreted in the institution's own terms. However, the applicant's scores will also be reported in terms of national norms, which in turn will be broken down further into norms for types of institutions, based on the best available information and statistical procedures. For some institutions, at least, this will be sufficient.
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> To assist schools and colleges still further, a detailed manual is in preparation, which will be a guide to the interpretation of test scores in terms of placement and curriculum equivalents. This manual will be supplied to all institutions as soon as it is completed and printed.

If the colleges and the secondary schools make full use of this program, their experiences with it should go far to establish the feasibility of using such methods as a regular peacetime means of determining educational status. In outline, the testing program is, of course, but an extension of the sort

of service long provided for a narrower purpose by the College Entrance Examination Board and by other testing agencies. If the experience with the general-competence tests is favorable, there is reason to hope that certain types of college requirements that have tended to restrict the curricular freedom of the secondary schools may be still further relaxed. Certainly the nontechnical part of the curriculum provided by life in the services should be a sufficiently radical departure from traditional education to afford a real check on the validity of the assumption that a definite curriculum which is a reasonable facsimile of that now in operation is essential to produce educational growth. Numerous studies, and most recently the Eight-Year Study of the Progressive Education Association, have seriously undermined this assumption, but it still has adherents.

That there is room for further demonstration of the weakness of the assumption is shown in a monograph recently published by the Educational Records Bureau. The *Fourth Report of the Committee on School and College Relations* of this bureau contains the recommendations sent by the committee to colleges in the United States and also presents in great detail the replies of 386 colleges. Study of the replies gives one considerable insight into the general point of view of the colleges as of the year 1942. More than three-fourths of these colleges favored the recommendation: "That colleges in considering a candidate for entrance shall give full weight to the results of comparable tests, made, given and scored by competent persons." About one-fifth were doubtful, and only 2 per cent were unfavorable. Recommendation D 1, however, was received much less favorably. The recommendation was stated as follows:

> 1. That the use of so-called "Carnegie Units" as a measure of secondary-school work be given up.
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> This step is strongly recommended in publications of the Carnegie Foundation for the Advancement of Teaching. An increasing number of leaders in education in both colleges and schools are convinced that the emphasis now given to symbols such as these units encourages pupils to make the obtaining of credits their main purpose, and so tends toward insincere and quickly forgotten learning. Also the traditional divisions of time, arrangements of periods, and other elements of unit measurement are rapidly changing so that a school often cannot calculate its work in such terms. Some classes that meet only once or twice a week, for example, carry out studies that require the pupils to investigate, and that are more mature and of more educational value than work done in daily recitations.
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> Schools are increasingly concerned with the planning of each pupil's course so that there is continuity, balance, and integration as well as suitability for the pupils. Emphasis on units makes this difficult.

Only 32 per cent of these colleges were favorable to this recommendation; about 52 per cent were doubtful, and 16 per cent were unfavorable.

Recommendation D 4 to the effect "that colleges state their detailed entrance requirements in a way calculated to abolish the 'fixed pattern' of subject requirements" was favorably received by 55 per cent of the colleges.

Seven per cent were unfavorable, and the remainder were doubtful.

Successful execution of the plans for using the examinations prepared by the Armed Forces Institute may thus accelerate another trend of the last few years and, in this way, may have a marked long-term effect upon education in the United States.

An Imminent Problem in Vocational Education

Although no accurate estimate can be made of the extent to which the secondary schools may be called on to assist in the vocational rehabilitation of disabled soldiers, it seems reasonably certain that their services will be extensively used. Congress has recently considered the Vocational Rehabilitation Act of 1943 (Senate 180), which as originally formulated was intended to be: "A bill to provide vocational rehabilitation education, training, and other services to persons disabled while members of the armed forces, or disabled in war industries or otherwise, and to render such persons fit for service in war industries, agriculture, or other useful civilian industry, and for other purposes."

The interest of the federal government in the vocational rehabilitation of disabled soldiers began during World War I. The legislation passed in 1918 was later extended to provide for the rehabilitation of persons who were not war veterans but who had been disabled by industrial accidents or in other ways. The present emergency has made urgent the need for an expanded rehabilitation service. Following are quotations from a report on the proposed legislation that was made to the Senate by its Committee on Education and Labor.

> While there was some difference in the views of witnesses as to certain provisions, there was a common agreement among all testifying before your committee as to the need for a greatly expanded vocational rehabilitation program. It was stated that at present more than 2,000,000 cases need attention of the state rehabilitation services as speedily as it can be given them. It was also pointed out that during the past three years there has been an increase of about 30 per cent in the employment of workers in industry, but on the other hand there has been an increase of 70 per cent in the incidence of disablement among workers in industry. These accidents have mounted steadily with the great influx of untrained workers and the increase in size and tempo of industrial operations. In addition there are civilians whose disabilities are more directly connected with the war. Injuries are daily occurring in the protective services, such as the civil air patrol. The sailors who man our merchant ships are being injured in appreciable numbers.
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> How many disabilities will arise from military service in the present war is difficult to estimate. Some guidance is afforded by experience in the last war when somewhat under 5,000,000 men were in our armed service, with an expeditionary force of some 2,000,000 intensively engaged for a relatively short period. From these forces there were 330,000 applicants for rehabilitation within a ten-year period; 179,000 of these were placed in training. It may be anticipated that utilization of improved medical techniques, including the new sulfa drugs, will result in a much higher percentage of recoveries by those who suffer wounds than was true in the last war. Unquestionably the incidence of disablement to this war will be very great.

From the long-range point of view there is no question but what the problem of disability is a problem which can be met only by huge expenditures of money. The very fact that a person who is normally a breadwinner is disabled often raises a relief problem as to him and his dependents. From the viewpoint of both federal and state treasuries, and of the disabled persons themselves, experience has demonstrated that the best approach for meeting the situation is an appropriate program of vocational rehabilitation. For all disabled this program of helping an individual to help himself is the best method of assisting him. It is in addition a program which is recognized in the case of disabled veterans as a part of the obligation due to those injured in serving their country.

Besides the long-range viewpoint the exigencies of the present manpower situation emphasize the need for speedy action. There is immediate need for all disabled who may be placed in industry. In many instances this may be done very speedily, as it is largely a matter of determining what kind of job the disabled individual may fill, bringing together the prospective employer and the disabled individual, and persuading each that the disability does not prevent the prospective employee from acceptably filling the job. In other cases prosthetic appliances or relatively simple operations may result in the immediate return of the disabled person to employment. In other instances training around a person's disability is required. Frequently this can be accomplished in a relatively short period.

As this is being written, a bill (Senate 786) which provides only for the rehabilitation of disabled veterans of the war has just been passed by the Congress. The fate of the more comprehensive proposals of Senate Bill 180 is in doubt. It is not too early, however, for school people to begin making plans for the future which take the problem of rehabilitation into account. In an address on this subject given at the annual meeting of the North Central Association of Colleges and Secondary Schools on March 24 in Chicago, Professor John Dale Russell, of the University of Chicago, commented as follows:

The imminence of the greatly expanded federal program of vocational rehabilitation has important implications for all kinds of educational institutions. In the program that is now developing, all sorts of facilities for training will be utilized. The rehabilitation service will not be limited to public institutions, but private schools and colleges, proprietary schools, industry, and various types of civic and philanthropic agencies will be utilized. Although these other agencies will be used more extensively than ever before, the total load of rehabilitation service will be so great as to require from the educational institutions of secondary and collegiate types a much larger program of training of this sort than has ever before been provided. As educators, we are naturally concerned chiefly with the effect of this program on our own institutions.

Much of the rehabilitation training will be given at the level of secondary education. Both public high schools and private secondary schools will undoubtedly be asked to participate in this program to the extent of their available resources. The training required will be in some respects similar to the vocational training already established in secondary schools, but the trainees will be mature men and women rather than adolescent boys and girls. The training will doubtless be for the most part on an all-day basis, but the group served will be more like those now enrolled in evening or part-time schools.

It seems quite clear that an adequate program of vocational rehabilitation will require the services of many thoroughly trained teachers and guidance workers. These persons will need

special knowledge drawn from varied fields, including not only education, but also medicine, sociology, business and industry, and others. The present supply of competent persons is obviously limited. Thus experienced teachers who already have some training in one or more of the fields involved should be on the alert for opportunities for further training along these lines. There is little doubt that their services will be in demand in the near future.

Should the National Youth Administration Be Continued?

It would be instructive if a poll similar to the Gallup polls could be taken among people who are familiar with the work of the National Youth Administration. For some time a number of organized groups, or at any rate their representatives, have been trying to have the N.Y.A. abolished. As is so often the case, however, the rank and file of the people have had little opportunity to make their views known.

One of the most recent attacks on the N.Y.A. is to be found in a pamphlet on *Wartime Vocational Training* published jointly by the Conference Committee of the American Association of School Administrators and the Committee on Education of the Chamber of Commerce of the United States. Many of the recommendations offered can be accepted without comment, but among them the following seems a bit off key.

> On December 24, 1942, the National Youth Administration indicated it would ask for a "several fold" increase in its appropriations, for higher pay for trainees, and elimination of the present age limits, to increase the number of trainees. On January 8 the Chairman of the Joint Committee on the Non-essential Federal Expenditures stated that N.Y.A. had more training stations than youth in some states. N.Y.A. was originally established to serve "unemployed" youth. On the whole N.Y.A. seems to have a separate, federally controlled, educational set-up paralleling the public school systems, with facilities duplicated in many communities.
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> *The National Youth Administration should be discontinued. The use of its equipment should be transferred to local and state authorities, and operated under U.S. Office of Education direction.*

It should be noted that this statement, even if accurate, tends to give a distorted impression of the N.Y.A. by focusing on only one aspect of its work, namely, the war training program. The aid through employment which the N.Y.A. gives to needy youth in the high schools and colleges is ignored. Whatever its original purpose may have been, the continuing need for some agency similar to the N.Y.A. has been made rather clear in recent years, particularly by the American Youth Commission in its report *Youth and the Future*. Still more recently the report of the National Resources Planning Board, which was transmitted by the President to the Congress on March 10, stresses the need for a youth program by noting:

> First, that our economy must provide work for all who are able and willing to work.

Included in this is a special responsibility for an adequate youth program which should be an integral part of any governmental undertaking to establish security. This will be peculiarly true in the post-war period.

A proposal which is attracting considerable attention and which is pertinent to this discussion is one recommending educational grants to all young people who can benefit from a college education. These grants would be distributed by the educational authorities; and "no part of the payment made to enable youth to continue school would be treated as part of the family resources."

Thus the experts of the National Resources Planning Board, whose competence to judge the need is at least equal to that of those who are opposed to the N.Y.A., are in favor of a youth program having, among its purposes, some aims similar to those of the present N.Y.A. Until the proposed program is in operation, one may ask why an existing program should be given a blanket condemnation.

An article on "Efficiency of the High School N.Y.A. Program in Colorado," by Robert A. Davis and Hazel Taylor, will be found in this issue of the *School Review*. Although the data supporting the conclusions of the article were collected about a year ago and in only one of the forty-eight states, there is little reason to suppose that markedly different results would be obtained today or elsewhere. This study, based on the collection of factual data and a relatively extensive sampling of opinion, provides an interesting contrast, both as to conclusions and as to methods of arriving at them, with the paragraphs quoted above from the pamphlet on *Wartime Vocational Training*.

Obviously one argument against the continuance of the N.Y.A. is that it costs money at a time when the government can ill afford the expense. Under the school work program of the N.Y.A., needy boys and girls in high school receive six dollars a month. In 1942–43 the average number of persons in the families from which these young people come is 5.8 for the United States as a whole, and the average annual income of the families is $837. In view of the known costs of attending school, not to mention the cost of living, it can hardly be maintained that the N.Y.A. payment is overgenerous. Aid to college students, although nominally larger, is relatively not so, because of the greater cost of attendance at college. Those who are ready to accept the major premises that one of the most valuable assets of any country is its youth and that the value of this asset is greatly increased by education are well along toward acceptance of the argument that the investment in youth through the N.Y.A. is one that the country cannot afford to reject. In view of the present shortage of manpower in many specialized fields which require extensive training (for example, medicine, engineering, and teaching), the need for this program, particularly at the col-

lege level, is perhaps greater than ever before.

The assertion that the training program of the N.Y.A. is duplicating the facilities of the vocational schools overlooks the fact that the latter are very largely urban while the N.Y.A. program takes care of boys and girls in both urban and rural areas. In an apparent effort to obtain data on this point, the American Vocational Association has been distributing the following questionnaire preceded by a statement that it has "officially been requested to supply" the information.

1. Are there many vacant training stations in the war production training program in the vocational schools in your state? Please indicate relatively how many and also give information relative to the possibility of securing trainees.

2. If authorized by Congress, could the vocational schools of your state absorb the trainees in the N.Y.A. war production training program? Please give a specific statement or statements.

3. Do you know of any N.Y.A. situations of extravagance, high cost or unnecessary training programs near vocational schools, or duplicating vocational school programs where the vocational schools could furnish the service? If you know of any confidential situations that might well be investigated, please cite cases and give locations and indicate, if you can, persons that the official Congressional Committees might confer with or correspond with in order to get at the facts.

4. Do you know of any cases of N.Y.A. solicitation of high school or vocational school students for N.Y.A. recruiting purposes? Please give such information as would be useful to the Congressional Committee.

5. Please give any pertinent information that you think would be illuminating and helpful to the Congressional Committee.

6. Have you any definite suggestions to offer with respect to the transfer of N.Y.A. equipment and vocational training programs to public schools? Any information showing need for this and justification for this, will be very helpful just now.

7. No time should be lost in having some reliable and dependable superintendents of schools in your state write immediately to your senators and congressmen urging the transfer of the N.Y.A. vocational training program to the public vocational schools under State Boards for Vocational Education through the U.S. Office of Education.

The following additional suggestions seem to be in order: (*a*) These questions and requests should be balanced by others as biased in favor of the N.Y.A. as these are against it. (*b*) Both sets should be incorporated in a single document and used to secure responses from a representative sample of persons who have had contact with the work of the N.Y.A. (*c*) The responses should be summarized and published. It would also be helpful if the replies could be classified in terms that would make clear the nature of any relationship which might exist between respondents and the N.Y.A.

MAURICE L. HARTUNG

Institute for Administrative Officers of Higher Institutions

The twenty-first annual Institute for Administrative Officers of Higher Institutions will be held July 8 and 9, 1943, at the University of Chicago. The general topic for discussion this year is "Higher Education under War Conditions." There will be two sessions of the institute each day, beginning at nine-thirty o'clock each morning and two o'clock each afternoon.

The program for both days will deal with specific problems confronting the higher institutions as a result of the war. The first session will be devoted to a discussion of the program of education under the auspices of the armed forces. At the afternoon session of the first day, consideration will be given to the question of the use of educational institutions by federal agencies. The third session, on the morning of July 9, will deal with the experiences of higher institutions with specialized training courses for the armed forces. At the final session the discussion will center in the more pressing problems of institutional management under war conditions. Representatives of different types of higher institutions, including universities, liberal-arts colleges, teachers' colleges, and junior colleges, have signified their interest in the topics to be considered during the several sessions of the institute. It is expected that the addresses and the general discussion bearing on the immediate problems of the higher institutions of the country will yield many valuable suggestions for administrative officers who are concerned with the adjustment of institutional programs and policies to the unusual requirements of training and production for the nation's war effort.

The printed programs of the institute may be obtained from Professor John Dale Russell, Department of Education, University of Chicago.

Conference for Teachers of Social Sciences in High Schools and Junior Colleges

The third annual Conference for Teachers of the Social Sciences in High Schools and Junior Colleges will be held at the University of Chicago, July 21–23, 1943. The theme of the conference is "The Post-war World and the Role of the Social Sciences." Three sessions of the conference will be held each day in the theater of Ida Noyes Hall. Although the conference will be chiefly concerned with the contributions of various fields of knowledge to an understanding of the post-war world, the effective use of these contributions in educational programs will also be considered fully.

Representative of the papers to be presented are the following: "The Trend toward Collectivism in Socio-economic Organization," "The Preconditions for a Democratic Social Order," "The Problem of the Democratization of Fascist Cultures," "The Political Significance of Geography," "Planning for Community Life," and "Education and Rational Political Action." For copies of the printed program, address Professor Earl S. Johnson, University of Chicago.

WHO'S WHO FOR MAY

Authors of news notes and articles The news notes in this issue have been prepared by MAURICE L. HARTUNG, assistant professor of the teaching of mathematics and teacher in the Laboratory Schools at the University of Chicago. STEPHEN M. COREY, professor of educational psychology and superintendent of the Laboratory Schools, and PAUL B. JACOBSON, principal of the University High School and assistant professor of education—both at the University of Chicago—provide a detailed account of the way in which the members of a high-school staff sought (1) to identify their educational convictions and (2) to discover whether their practices actually were consistent with their professed beliefs. GRANT RAHN, principal of the Shorewood High School, Shorewood, Wisconsin, argues that the need for reorganization of mathematics in the secondary school is imperative, not for the purpose of producing specialists, but for the purpose of enabling each pupil to achieve mathematical competence in terms of his individual abilities and probable future needs. ROBERT A. DAVIS, professor of education at the University of Colorado, and HAZEL TAYLOR, assistant in the Bureau of Educational Research at the same institution, report the findings of an extensive survey of Colorado high schools undertaken to determine the efficiency of the N.Y.A. program as judged by pupils, supervisors, administrators, and representative citizens. E. C. BOLMEIER, director of secondary education in the public schools of Jackson, Mississippi, describes a system of reporting pupil progress which takes into account the individual's aptitude, attitude, and effort, as well as his scholastic accomplishments. MARGARET L. TRIPLETT, teacher of art at the Norwich Free Academy, Norwich, Connecticut, discusses some of the influences which have contributed to the development of artists of recent times and points out implications of these facts for the teacher of art in the secondary school. G. T. BUSWELL, professor of educational psychology at the University of Chicago, and MANDEL SHERMAN, associate professor of educational psychology at the same institution, present a list of selected references on educational psychology.

Reviewers of books PAUL GOSSARD, superintendent of the public schools at Bloomington, Illinois. CLIFFORD R. MADDOX, supervisor of instruction at Thornton Township High School, Harvey, Illinois. LOY NORRIX, superintendent of the public schools at Kalamazoo, Michigan. NELSON B. HENRY, associate professor of education at the University of Chicago. BABETTE LEMON, teacher in the Laboratory Schools at the University of Chicago.

A HIGH-SCHOOL STAFF STUDIES ITS PHILOSOPHY

STEPHEN M. COREY AND PAUL B. JACOBSON
University of Chicago

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DURING the academic year 1940–41 the high-school faculty of the University of Chicago Laboratory Schools studied the problem of pupil acceptance of responsibility.[1] This study of pupil responsibility made clear the fact that, in some cases at least, the various members of the high-school staff were working toward different ends. There was evidence that a part of the unwillingness of pupils to accept responsibility was a consequence of confusion within the faculty as to what values should be sought in a high-school education.

PLAN FOR STUDY

Because it realized that this confusion was interfering with the effectiveness of the curriculum, the high-school faculty, at the conclusion of the study on pupil responsibility, decided to devote the year 1941–42 to stating, clarifying, and studying the implications of its philosophy of education. Early in the discussions the staff concluded that it had little confidence in a procedure which involved (1) writing out a statement of educational convictions, (2) voting to "accept" this philosophy, and (3) publicizing the statement as the philosophy of the teachers. Such a method seemed to be excessively verbalistic and, in the judgment of the teachers, rarely brings about any significant changes in educational practices.

As a result of their preliminary planning, the high-school faculty decided to divide the year's activity into three parts. The first was to involve an identification of the philosophical convictions held by the various members of the staff, with a subsequent attempt to discuss and to clarify these convictions and to arrive at greater agreement with respect to them. The second part was planned to consist in an examination of the curriculum and the instruction in the high school in order to note the practices which were consistent or inconsistent with professed beliefs. The third phase (which was not undertaken because of the time required for the other two) would have involved actual changes in the high school in order to make instruction consistent with professed beliefs. The third part of the total program became the "core" for the faculty seminars during 1942–43.

[1] Stephen M. Corey and Gustav J. Froehlich, "A High-School Staff Studies Pupil Responsibility," *School Review*, L (October, 1942), 568–76.

As has been said, the high-school staff realized that developing a philosophy meant much more than getting a series of statements down on paper. Repeatedly various faculty members emphasized the point that the most valid indication of a philosophy is the actual teaching which is practiced in a school. Gross inconsistency between educational practices and professed philosophy indicates that the philosophy is on the verbal level only and does not represent genuine convictions in the sense that the teachers are willing or able to act in accordance with the beliefs that they have accepted verbally.

DETERMINING EDUCATIONAL CONVICTIONS OF FACULTY

In order to get discussion started, a committee of teachers was instructed to draw up a schedule of statements of alternative beliefs about educational matters. This committee worked for some time at its task and eventually presented to the faculty the accompanying "questionnaire," which was a revision of one used in the public schools of Lincoln, Nebraska. After each statement is a record of the number of Laboratory School teachers who accepted it. The totals vary because some of the teachers did not react to every statement.

ALTERNATIVE VIEWPOINTS IN EDUCATIONAL THINKING

Will you please read the alternative statements and without spending too much time wondering about possible implications of each term, check the one which in your judgment represents the more desirable emphasis?

In case you find it impossible to agree with either alternative, even from the point of view of the relative desirability of its implications, place a check in the parentheses after the statement, "Can accept neither of these alternatives."

Please return this questionnaire to the High School Office at once. It need not be signed.

	Number of Teachers
A. Relation of Education to Public Interest	
1. Education in schools should stimulate pupils to direct their efforts in greater degree toward—	
Self-preservation and advancement in a competitive world	1
Advancement of self and others through co-operative effort	27
Can accept neither of these alternatives	2
2. Education in schools should—	
Confine its social teachings to transmission of the social heritage	0
Concern itself with the improvement of American society	25
Can accept neither of these alternatives	4
3. The general welfare of the American people is likely to be raised more by—	
Direct efforts to educate all	27
Concentration of efforts on those most likely to succeed	0
Can accept neither of these alternatives	2

	Number of Teachers
4. Satisfactory leadership in a democracy is more likely to be secured by—	
Emergence of leaders out of situations offering opportunity for leadership	22
Early selection and specific training of gifted pupils for leadership	3
Can accept neither of these alternatives	2
B. Nature and Content of Curriculum	
5. The school curriculum should be based on the assumption that—	
The child is the starting point, the center, the end	19
Subject matter furnishes the starting point, the center, the end	1
Can accept neither of these alternatives	8
6. In determining curriculum content, greater emphasis should be placed on—	
Present needs and values	16
Deferred or future needs and values	3
Can accept neither of these alternatives	8
7. Our knowledge of individual differences points to the need for—	
Greater flexibility in program	28
More rigidity in program	0
Can accept neither of these alternatives	0
8. Under present conditions there is greater need for improvement—	
In dealing with the intellectual factors of education	2
In dealing with emotional and personality factors	21
Can accept neither of these alternatives	0
9. and 10. Learning is likely to be more permanent—	
9. When it is self-initiated and self-directed	25
When it results from performing a required task	1
Can accept neither of these alternatives	3
10. When it is motivated by intrinsic values	24
When it is motivated by extrinsic rewards or compulsions	0
Can accept neither of these alternatives	4
11. and 12. Greater all-round development of pupils is likely to result from a policy which stresses—	
11. Assuming responsibility	25
Following specific directions	1
Can accept neither of these alternatives	5
12. Finding things out for one's self	26
Being told by others	0
Can accept neither of these alternatives	2
13. The power to think is more likely to be developed by—	
Attempts to solve problems of real life	27
Exercises to sharpen the wits and develop the mind	0
Can accept neither of these alternatives	1
C. Discipline	
14. and 15. The discipline likely to have greater value to a pupil is that which comes from—	

	Number of Teachers
14. Self-control	23
Control by authority	1
Can accept neither of these alternatives	4
15. Hard work as a means of attaining a desirable pupil purpose	27
Hard work for the purpose of inuring the pupil to hard work	0
Can accept neither of these alternatives	1
D. The Teacher's Role	
16. The teacher's role in a class group is better conceived as that of—	
One who controls the pupils and their activities	0
A counselor of the pupils and a participant in their activities	24
Can accept neither of these alternatives	3
17. When controls are exercised by the teacher, they should preferably be—	
Positive and directive	28
Negative and restrictive	0
Can accept neither of these alternatives	3
18. A teacher's greater concern should be with—	
The all-round development of a pupil	26
The pupil's achievement in the subject or subjects studied	0
Can accept neither of these alternatives	3
E. Appraisal of Results	
19. The better criterion for judging the results of schooling is—	
What pupils know in the sense of knowledge or information	0
What pupils do, how they live	25
Can accept neither of these alternatives	0
20. Standards for a pupil's achievement should be derived from a—	
Comparing of his achievement with the achievement of other pupils	1
Comparing of his achievement with his past achievement and known capabilities	23
Can accept neither of these alternatives	5
21. The better criterion for judging the value of an educational experience to a pupil is—	
The contribution of the experience to total learning, including elements for which it was not specifically designed	26
The contribution of the experience to the specific learning it was designed to bring about	0
Can accept neither of these alternatives	2

The reader will note at once that a series of alternative beliefs such as is represented by this schedule leaves much to be desired. For one thing, there is too little opportunity to express various degrees of conviction. Many conscientious teachers are temperamentally opposed to assuming an extreme position. Despite these complications, however, there was considerable unanimity of opinion, as can be inferred from the frequencies shown.

DETERMINING WHETHER PRACTICES ARE CONSISTENT WITH BELIEFS

In order to narrow its activities down to dimensions that would make possible some effective work, the staff decided to choose from the total list of twenty-one alternative viewpoints those on which agreement was most marked and then to use these selected beliefs as criteria by which to evaluate practices in the high school. Consequently the following professed beliefs were chosen for further study.

7. Our knowledge of individual differences points to the need for greater flexibility in program.

13. The power to think is more likely to be developed by attempts to solve problems of real life.

15. The discipline likely to have greater value to a pupil is that which comes from hard work as a means of attaining a desirable pupil purpose.

17. When controls are exercised by the teacher, they should preferably be positive and directive.

The faculty then divided itself into four committees, which met for extensive discussion and soul-searching to discover specific Laboratory School practices which were consistent or inconsistent with each of the four beliefs. For example, the subcommittee concentrating on the importance of positive and directive controls identified certain implications of belief in such controls and also cited many pertinent illustrations of good and bad teaching. The following series of excerpts is taken from this committee's report.

REPORT OF SUBCOMMITTEE ON POSITIVE AND DIRECTIVE CONTROLS[1]

School Controls Should Be Positive and Directive Rather than Negative and Restrictive

IMPLICATIONS WITH RESPECT TO INSTRUCTION

A. Control is more apt to be positive if pupils share responsibility in setting up goals which are to be achieved or questions for which answers are to be sought.

Consistent Practices	Inconsistent Practices
1. In the study of "Houses and Home Life," as a result of skilful questioning and looking at pictures, pupils have set up a series of questions that they want answered by their study.	1. Assignments such as "Read the next six pages" approach much more closely the negative, as does the setting-up of an arbitrary assignment, the purpose of which the pupil does not see. An example is a spelling list.
2. Pupils share in setting up "dead lines" for the conclusion of a unit. The teacher may then *administer* the group decision.	2. The teacher says, "Due Friday," without considering the pupils' other assignments and responsibilities.

[1] This subcommittee included the following persons: Martha D. Alexander, Arthur G. Bovée; Marie Côté Greene, Maurice L. Hartung, Leslie W. Irwin (chairman), Paul B. Jacobson, Kathryn D. Lee, Katherine M. Rahl, and Eugene C. Wittick.

Consistent Practices	Inconsistent Practices
3. Pupils share in the selection of a number of units for study from a much longer list which the teacher presents as impartially as possible.	3. In several subject areas pupils have very little or no choice in the selection of units for study.
4. Pupils who enter English from other schools are sometimes discovered to have deficiencies, for example, in writing tables. Mimeographed instructional material to cover this deficiency is available and is used by the individual who needs it.	4. Because a pupil does not turn in neat work or is otherwise "delinquent," the teacher "subtracts" from the mark that would normally be given.
B. Control is more apt to be positive if pupils develop their own critical powers.	
1. The accuracy of a pupil's answer is considered by the rest of the class. If there is disagreement, the causes are discussed until general agreement is reached or until the sources of the disagreement are understood.	1. The teacher says, "That's right!" or "That's wrong!" "Yes," or "No." Pupils rely on the authority of the teacher or the textbook.
2. In a mathematics class the pupil himself recognizes that his definition is erroneous by applying it to a mathematical situation until something incongruous is seen. Thus the correction comes from the weakness in the definition itself.	2. Teacher gives his judgment of the accuracy of an answer without showing why the answer is wrong or right.
C. Control is more apt to be positive if pupils share in the responsibility of planning for, and carrying on, the evaluation of their work.	
1. Pupils are given an opportunity to help decide upon the scope of a proposed examination or examination program. The teacher indicates possibilities and values not mentioned by students.	1. An examination is announced by the teacher with limited or no discussion of its purposes or scope.
2. Pupils help decide upon dates when tests are to be given. (This must be subject to some limitations in the case of a school-wide program.)	2. The hour of the examination is chosen to suit the convenience of the teacher only.
3. Results of achievement examinations are carefully interpreted to the class. Students help plan methods for eliminating weaknesses shown.	3. Grades are awarded and recorded, but no further action is ordinarily taken.
D. Control is more apt to be positive if much attention is given to motivation of work and conduct.	
1. When a new subject is to be presented, pupils participate in the "preparation." They bring out what they already know and are led to see *why* the next step is desirable or necessary.	1. Teacher says, "We are going to start a new book in French," without connecting it with previously learned material or giving any incentive for reading it.

Consistent Practices	Inconsistent Practices
2. Good reasons for development of certain behavior standards are brought out and discussed in home room or classroom so that pupils understand them and want to conform to the rules they have had a part in making.	2. Administration issues the dictum: "Pupils may go to lunchroom or home for lunch but must not go to the drug store."

E. Control is more apt to be positive if teachers adopt the "guidance point of view," particularly in dealing with the personality and behavior problems of pupils.

1. The teacher welcomes the opportunity to discuss the academic *and* personal "problems" (this word including more than learning difficulties) of individual pupils with them.	1. The teacher takes the position, "This is none of my business," or, after a superficial analysis, says, "See your adviser, or go see ———."

IMPLICATIONS WITH RESPECT TO GENERAL PROCEDURES

A. Control is more apt to be positive if pupils help set up rules or participate in a discussion of rules.

1. Seventh-grade pupils have drawn up a "Code of Conduct" on field trips as a result of their first trip to the Art Institute.	1. A "Code of Conduct" is issued from the principal's office.
2. Pupils pass freely from class to class and generally assume responsibility for proper action.	2. The custodian prevents disorder and noise in the halls by his physical presence.
3. Many pupils are late to class. The teacher works out with them procedures for arriving on time in the future.	3. "Go to the office for a pink slip." Some pupils are sent for a slip because they were not seated even though they were in the room.

B. Control is more apt to be positive if, after pupils have set up a "Code of Conduct" or have helped to formulate a rule, they participate in its administration.

1. When a rule is broken, the teacher confers with the pupil, or pupils, as soon as possible, discusses the difficulty, and, if possible, has the pupil fix the consequences. The consequences should fit the case and be promptly administered either by the pupils or by the teacher.	1. When a rule is broken, the teacher administers an arbitrary punishment.
2. Pupils show strong disapproval toward other pupils who violate rules that they themselves have helped to make. Rules regarding clean-up and order in the shop are well kept in most cases because pupils have helped to make them. They watch one another and voice strong disapproval toward those who are careless.	2. The teacher does all the rule-enforcing by continual nagging.

C. Control is more apt to be positive if pupils have a choice in selecting clubs and directing club activities.

Consistent Practices	Inconsistent Practices
1. A bulletin of information is prepared to assist pupils in making decisions with respect to choosing clubs. In addition, provision is made for the formation of clubs not listed if pupils request such and a sponsor is available.	1. Some teachers are so anxious for clubs to succeed that they allow pupils very little share in planning and conducting meetings.

D. Control is more apt to be positive if pupils have a choice in attending assemblies and share in planning the assembly programs.

1. Choice is provided in attending assembly or study. Assemblies are announced so that pupils may choose. An assembly committee of pupils with faculty sponsor plans for the entire series.	1. A few pupils do not go to assembly or study. Some teachers feel we should require attendance or that assemblies should be discontinued.

Three other committees made reports similar to that reproduced. In each case the procedure was (1) to state the belief about education that the staff had accepted verbally, (2) to enumerate some of the specific implications that this belief has for secondary education, and (3) to describe instances of teaching practice in our own school which were either consistent or inconsistent with the belief. This insistence upon translating convictions about desirable pedagogical procedures into school practices vitalized the discussions and made concepts that ordinarily would be nebulous and vague quite concrete and specific. The members of the committees reported that they had little difficulty in describing practices of their own which were inconsistent with their professed beliefs. This experience, in and of itself, is a salutary one and is likely to result in instructional and curricular improvements regardless of any additional formal staff activity.

After the four committees had reported (and this activity took the greater part of the year), the Committee on Professional Meetings identified some common threads which ran through all reports and made the following recommendations for a program of action for the school year 1942–43.

First, teachers in each of the curricular areas in the high school should assume responsibility for examining its curriculum in detail and reporting to the faculty: (*a*) current procedures which are consistent with the principles agreed on as desirable, (*b*) current procedures which are inconsistent with such principles and which should be modified or abolished, (*c*) procedures which should be inaugurated in order to implement more adequately our beliefs.

Second, the survey proposed above should be limited in scope to these four considerations:

a) Participation by pupils in setting up meaningful goals. There are, in the opinion of the Committee on Professional Meetings, these three types of meaningful units, all of which have their place:
   (1) Those which the pupils choose from a larger list, e.g., "Amusements and Sports"
   (2) Those which are meaningful to children but which would not be readily chosen from a longer list, e.g., "Our Language"
   (3) Units suggested by pupils

b) Participation by pupils in planning meaningful activities to attain such goals

c) Provision for pupil growth in self-direction and the attainment of goals agreed upon

d) Provision for individual differences through differentiated goals, procedures, and materials

Third, staff meetings for the first semester of 1942–43 should be, as largely as possible, given over to meetings by departments or other groups for the proposed surveys and reports.

To make clear to the staff how its recommendations might be carried out, the Committee on Professional Meetings presented the illustration of an analysis of a minor unit in the seventh-grade integrated-arts program which is reproduced on page 278. The children concerned had decided to have a "brunch"—a combined breakfast and lunch.

CONCLUDING COMMENTS

Studying a very large portion of the high-school curriculum as carefully and critically as this single arts project was studied is a time-consuming process. To do so, however, is exceedingly valuable. Growth is a slow process, not only for children, but also for teachers. There is little reason to anticipate that the University High School curriculum will be completely revised by June, 1943, or that a program deemed good in June, 1943, will still be satisfactory in 1945. The writers are convinced, however, that there is only one effective way to improve any high school and that that one way calls for group action and the sharing of responsibility. A staff must study itself and its own practices first, and an excellent beginning point yields an answer to the questions: "What do we believe about education?" "How do our practices appear in the light of these beliefs?"

BRUNCH UNIT—GRADE VII

A. Procedures consistent with expressed beliefs

1. These meaningful goals were written on the board as given by students:
   a) We want to learn how to cook different things.
   b) We want to make real meals.
   c) We want to learn how to buy food.
2. There was the following teacher-pupil planning:
   a) The teacher made a calendar schedule for the five weeks, setting aside the first two Mondays for breakfast preparation and the last Monday for "brunch."
   b) The students divided themselves into groups for work.
   c) Each group planned two breakfast menus and one "brunch" menu.
   d) Each group then made out a plan for work in preparation for the breakfast. They planned when and what they would study and tried out the more difficult dishes to be prepared.
3. Provision for self-direction was provided by:
   a) Having students find recipes in cookbooks.
   b) Making out order lists for needed supplies.
   c) Each group organizing itself into a work group, rotating jobs, and dividing responsibilities.
4. These provisions for individual differences were made:
   a) Pupils with the least previous knowledge were referred to simplified instruction which gave very detailed steps.
   b) Within each group the pupils were urged to divide jobs so that all got practice in things they had not done before.
   c) Strong students were encouraged to help weak students or new students but warned not to do the work for them.

B. Procedures less consistent or actually inconsistent with the staff's beliefs

1. The teacher eliminated some student suggestions rather arbitrarily, as: (*a*) too expensive, (*b*) too difficult, (*c*) not appropriate for breakfast.
2. The teacher insisted on maintaining certain standards of clean-up.
3. The teacher insisted on calculating costs, in the face of pupil opposition.

C. Procedures either not in operation or not fully utilized

1. With more time for each unit and more experience in planning and evaluating the purposes of their study, the pupils will be able to participate more effectively in stating goals.
2. It will also be more meaningful if the teacher makes more of an effort to help students see the extent to which they are attaining what they set out to do.
3. More effective learning will result if the teacher in the future can provide some really valid instrument for testing the attainment of pupil-stated goals.
4. Participation in planning activities will be more successful only when students see the difference between valid goals and *momentary wishes*.
5. There are probably many meaningful activities in which students can engage when they broaden their concept of study to include all of living within the school.
6. In order better to provide for individual differences, all class work will have to be set up on a more individualized basis which will eliminate comparison of accomplishment with others. Also, by some means, ample opportunity must be given for social experience or group work.

A REDIRECTED EMPHASIS ON INDIVIDUALIZED MATHEMATICS FOR ALL

GRANT RAHN
Shorewood High School, Shorewood, Wisconsin

*

THE war has brought a cry for renewed emphasis on mathematics in high school, but there is evidence that this need is interpreted to mean that all or almost all high-school pupils should study algebra and geometry. This uncritical acceptance of the call for greater attention to mathematics indicates lack of analysis and of perspective. It indicates a disregard of the fact that, for the best interest of many individuals as well as that of our country, some subjects have much greater value than have algebra and geometry.

The need for giving more attention to mathematics in high school is basically sound, but the need is little greater in wartime than in peacetime. What high-school teacher has not been confronted by the businessman's accusation: "Your graduates can't do simple arithmetic!"

When the Army speaks in wartime, however, it has a powerful voice, for the safety of the country is recognized to be in jeopardy. The public listens. Teachers snap to attention. The schools will either try to drive all pupils through traditional algebra and geometry or will raise the question: "Mathematics for whom and for what?"

MATHEMATICS FOR WHOM?

Those who raise the question of who should study mathematics will recognize the logic in the following statement.

> For about 20 per cent[1] of our boys in and out of school, a war-applied course in physics and mathematics will give excellent background for continued specialization at the college level. They will constitute a reservoir from which many of our officers will be drawn. For the remainder of the boys in and out of school, more specific fundamental courses are needed.[2]

For many of this 20 per cent a full four years of mathematics is desirable, because a highly technological world requires many who can deal with the quantitative in the highest reaches that the individual can achieve. Nevertheless, even for this group, reorganization is necessary so that the abstract mathematical principle will be approached *from problem situations recognized by the learner as important.* Gradual achievement of such reorgan-

[1] The percentage is considerably higher in Shorewood, for the median intelligence quotients of successive classes are between 115 and 120.

[2] *Pre-Induction Training Course: Fundamentals of Electricity*, p. 3. Prepared jointly by the Pre-Induction Training Section, Civilian Personnel Division, Services of Supply, and the U.S. Office of Education. PIT–101. Washington: Government Printing Office, 1942.

ization requires those critical, analytical, and understanding mental attitudes revealed by Kinney in a recent article.[1]

This reorganization, however, will not satisfy the needs of the remaining 80 per cent of the pupils. This group will profit more from the development of abilities and skills in other areas than from four or even two years of mathematics. Some of the elective areas which are more promising for various individuals in this group are mechanical drawing, shopwork, preinduction courses, agriculture, commercial work, and foreign languages. The following statement of Al Williams, who has been writing about aviation for some time, illustrates the necessity for discrimination with regard to individual needs in one area.

> Careless habits of loose thinking led to the assumption that knowledge of algebra, plane and solid geometry, and trigonometry was absolutely necessary for candidate student pilots.
>
> Of course, a candidate for training as an aeronautical engineer must be educated in higher mathematics, but it isn't engineers—slide-rule manipulators—we need now. It's pilots—men to fly the planes. . . . . Let's quit bowing before the shrine of engineering, teach our youth how to use the machinery of this war, and let the engineers worry about the formulae and the higher mathematics. All those physically fit and mentally alert youngsters who can learn to drive automobiles expertly in a short time can learn to fly airplanes expertly without becoming semi-engineers.[2]

[1] L. B. Kinney, "The Reorganization of Mathematics for the Emergency," *Mathematics Teacher*, XXXVI (January, 1943), 3–10.

Fortunately people can still learn after graduation from high school. If an individual finds himself in a specific job requiring some specialized mathematical process higher than that needed by the man on the street, he can learn it on the job.

MATHEMATICS FOR WHAT?

Yet the 80 per cent, too, are living in a quantitative world. Do they not need a command of mathematics greater than that achieved by the individual at the end of Grade VIII?

We at Shorewood High School have long thought so. Hence we instituted a course in consumer mathematics for those Juniors and Seniors who had not studied algebra and geometry and who could be persuaded of their everyday need for some mathematics. The course, under constant revision, consists of problems which are meaningful to the pupils and which involve use of the fundamental operations and such other concepts as the formula, the simple equation, and the graph. The course is made available to Juniors and Seniors only, because it is more meaningful at their level of maturity and experience than it would be earlier. This course is no "snap," but it is so graded in difficulty at several levels that all pupils may succeed according to ability.

Not at any time during the half-dozen years in which it has been offered has there been a call for more

[2] Quoted in Walter E. Myer and Clay Coss, *Education for Democratic Survival*, p. 90. Washington: Civic Education Service, 1942.

than one section or, at most, two sections. This small enrolment disturbed the faculty, as did the fact that too many pupils who obviously had greater need for experience in other areas were electing algebra and geometry. The widespread choice of algebra and geometry occurred because these subjects are traditionally respectable in this community, which sends 50 per cent of each graduating class to college. It has occurred, too, because of the college-entrance requirement that specific subject patterns be presented. With the trend among colleges toward basing entrance requirements on more valid measures of competence, the problem of guidance into mathematics on the basis of probable individual need and ability can be more realistically met.

The mathematics department, as a first step toward the accomplishment of this end, gave to all members of last year's graduating class a test on the fundamental operations (addition, subtraction, multiplication, and division) involving whole numbers, fractions, decimals, percentage, and applications of percentage. The highest possible score was 67, as the test consisted of 67 items. The results are presented in Table 1. Clearly several inferences may be drawn from the data.

1. All groups including pupils who have studied from two up to four semesters of high-school mathematics contained pupils who achieved very low scores. Achievement of such low scores as those shown for these groups certainly does not denote competence to handle the quantitative matters which every person meets in daily life.

2. The lowest scores for the groups including pupils who have taken more than two years of high-school mathematics are relatively high for two reasons: (*a*) These pupils have mathematical aptitude. (*b*) They have profited arithmetically from their extended study of mathematics.

TABLE 1

SCORES ON MATHEMATICAL TEST MADE BY SENIORS HAVING COMPLETED VARYING NUMBERS OF COURSES IN MATHEMATICS

LAST MATHEMATICAL COURSE COMPLETED	NUMBER OF PUPILS	SCORE ON TEST			
		Range	Upper Quartile	Median	Lower Quartile
None	12	11–35	32	24	13
Consumer mathematics	15	16–61	50	42	23
Algebra I	10	14–47	43	39	27
Algebra II	11	22–63	51	44	32
Geometry I	13	28–61	54	44	33
Geometry II	104	9–67	54	47	41
Algebra III	5	42–60	.....	57	.....
Three years of mathematics	21	51–67	65	60	57
Four years of mathematics	19	55–66	65	63	61

3. The upper half of the group of pupils who have taken consumer mathematics compares favorably with the upper half of the group of pupils who have taken elementary algebra and plane geometry, as far as handling the fundamental operations required in social situations is concerned. This finding is especially significant in light of the fact that it is the abler students who, because of need, tradition, and entrance requirements of many colleges, study elementary algebra and plane geometry. These data tend to indicate that, unless a pupil will have specific use for elementary algebra

and plane geometry, he will gain about as much ability to handle everyday mathematics if he takes a year of consumer mathematics.

NEXT STEPS

The outcomes of this test stimulated thought among the teachers of mathematics. By examining the individual papers, they discovered that a number of pupils who had managed to "get by" in algebra and geometry were grossly incompetent in everyday mathematics. They reflected on the difficulty experienced by many pupils in algebra and geometry, and they agreed that for such pupils consumer mathematics would be much more significant than traditional mathematics. As a consequence they agreed that the past practice of providing counselors with the individual's marks in seventh- and eighth-grade mathematics, his percentile rank in scholastic aptitude, and his score on the Orleans Prognosis Tests in algebra and geometry as a basis for conference with the pupil and his parents was not achieving results so far as mathematics was concerned.

They then set up a board of review consisting of two of the teachers of mathematics. This board evaluates the data for every pupil and determines who may be recommended as a good risk for traditional mathematics. It provides every counselor with a list of the pupils recommended. If the board has not placed a pupil on the recommended list, the counselor may not schedule him for algebra. If the parents insist on algebra, the board reviews with them the data and the implications for their child. The board may recommend that the study of algebra be deferred for a year, when the case may be reopened. If in the meantime the pupil has grown in purpose and self-direction, the board may approve his election of algebra. In case of parental insistence on algebra at once, the board requires from the parent a written statement which, though it pledges the school to do its best with the pupil, absolves the institution from the consequences. This rather dramatic requirement has the psychological effect of so challenging pupil and parent that the necessary effort to insure success sometimes ensues.

The teachers of mathematics further agreed that work on the fundamental operations of arithmetic ought to be included in their algebra and geometry classes in order to assist pupils to maintain and extend abilities and skills in the mathematics of everyday life. They will give annually to all Sophomores a revised test on the fundamental operations. They will furnish counselors with the results and will recommend consumer mathematics for those pupils who need the course as preparation for the relatively certain demands of everyday life.

Present thinking would seem to indicate that the time is not far distant when a requirement for high-school graduation will be competence in mathematics in terms of the individual's ability and his probable future needs in the handling of mathematical processes.

EFFICIENCY OF THE HIGH-SCHOOL N.Y.A. PROGRAM IN COLORADO

ROBERT A. DAVIS AND HAZEL TAYLOR
University of Colorado

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THE present study was undertaken by the Bureau of Educational Research of the University of Colorado in response to an invitation by the Colorado State Advisory Council on Student Work, which wished to evaluate as objectively as possible the program of the National Youth Administration in the high schools of the state.

During the autumn of 1941 the Bureau, with the assistance of the Council, developed a series of six question forms designed to obtain information from N.Y.A. pupil workers, from other pupils in the same schools, from school staff members who directly supervise N.Y.A. workers, from school officials, and from representative citizens in the communities. These forms were designed to determine what N.Y.A. pupils do, how their work is supervised, how N.Y.A. is regarded by other pupils in school, and what the people in the community think of the N.Y.A. program in their local school; and, in addition, to find out whether the work of these pupils is just so much "busy work" or whether it has educational and vocational values and whether, in the light of an analysis of its present status, it can be improved.

In February, 1942, the question forms were sent to a sampling of 105 high schools chosen at random from the 336 Colorado schools participating at the time in the student work program. All forms were returned directly to the Bureau of Educational Research of the University of Colorado, where they were tabulated and interpreted. The study is based on returns from 98 schools, or 93 per cent of those chosen. A total of 3,223 forms was received, distributed as follows: from N.Y.A. pupils, 890; from non-N.Y.A. pupils, 896; from supervisors, 721 (a report for each N.Y.A. worker); from supervisors in direct supervision of N.Y.A. workers, 411; from official N.Y.A. representatives (school administrators, principally) 79; and from representative citizens, 226. These represent an average of 80 per cent of the potential respondents in the 98 school communities from which replies were received.

The present report is limited to a discussion of the jobs held by these pupils and the efficiency of the program, as judged by the opinions of pupils

working under N.Y.A. and those not so employed, by N.Y.A. supervisors (usually teachers), by the schools' official representatives, and by representative citizens in the community. purposes, into the following classifications, as used by the National Youth Administration: (1) departmental assistance, (2) construction and maintenance, (3) clerical assistance and

TABLE 1

DISTRIBUTION OF 879 N.Y.A. WORKERS IN COLORADO HIGH SCHOOLS ACCORDING TO TYPE OF PROJECT

TYPE OF PROJECT	BOYS		GIRLS		BOYS AND GIRLS*	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Departmental assistance:						
Library service	26	8.8	75	12.9	101	11.5
Study hall	.....	.....	2	0.3	2	0.2
Departmental services	38	12.8	207	35.5	245	27.9
Home economics	.....	.....	27	4.6	27	3.1
Lunchroom	2	0.7	39	6.7	41	4.7
Total	66	22.3	350	60.0	416	47.3
Construction and maintenance:						
Building maintenance	156	52.7	23	4.0	179	20.4
Constructing and repairing buildings and furniture; redecorating	21	7.1	.....	.....	21	2.4
Repairing equipment and apparatus	14	4.7	.....	.....	14	1.6
Improvement and maintenance of grounds	7	2.4	.....	.....	7	0.8
Total	198	66.9	23	4.0	221	25.2
Clerical assistance and service	14	4.7	189	32.4	203	23.1
Semi-professional work:						
Health	.....	.....	3	0.5	3	0.3
Recreational assistance	6	2.0	8	1.4	14	1.6
Arts and crafts, music, and writing	2	0.7	5	0.9	7	0.8
Total	8	2.7	16	2.7	24	2.7
Miscellaneous	10	3.4	5	0.9	15	1.7
Grand total	296	100.0	583	100.0	879	100.0

* A representative sample of work schedules, submitted to the N.Y.A. for the academic year 1939–40, gave the following percentages: departmental assistance, 40.7; construction and maintenance, 28.9; clerical assistance and service, 21.6; semi-professional, 6.4; miscellaneous, 2.4.—"Youth and Work Opportunities," *Bulletin of the National Association of Secondary-School Principals*, XXIV (April, 1940), 46.

KINDS OF WORK DONE

Each pupil was asked to name all the activities which he performed in his N.Y.A. work. The information obtained was arranged, for comparative service, and (4) semi-professional work.

The distribution of 879 N.Y.A. pupils according to type of work and sex is presented in Table 1. Some sig-

nificant sex differences may be observed. Two-thirds of the boys are assigned to tasks involving construction and maintenance, and more than half to the maintenance of buildings and grounds. The following are some of the tasks reported by the pupil workers: cleaning blackboards and erasers, cleaning fountains and showers, washing windows, mopping and waxing floors, building fires, and taking care of the heating system (stoves, furnace, boiler, or stoker). Such work is usually under the supervision of the school custodian. Three-fifths of the girls are assigned to teachers for work involving assistance in regular school departments, largely routine tasks such as scoring papers, checking workbooks and book reports, preparing seatwork for primary-grade children, taking care of supplies and equipment for science and home-economics laboratories. Fewer than a fourth of the boys are assigned to such tasks. Almost a third of the girls are engaged in clerical work, consisting principally of typing, filing, mimeographing, and checking records. Fewer than 3 per cent of either boys or girls are doing work of a semi-professional nature, such as assisting the school nurse in the clinic, assisting with recreational activities, making costumes for plays, and editing the school paper. About 12 per cent of the boys are engaged in construction and repairing.

EFFICIENCY OF THE PROGRAM

As a means of determining the efficiency of the program, the respondents were asked to write in their evaluations, both favorable and unfavorable, of the program; to make suggestions for improving it; to state whether they favored a continuance of the program; and to give reasons for their opinions.

Opinions of N.Y.A. pupils.—The workers themselves regard the N.Y.A. program as a means of giving aid to pupils in financial need (the response checked by 54.1 per cent). They also regard it as an opportunity to obtain practical training (checked by 22.2 per cent). The boys state that the purpose of the work is clear to them, and the girls believe that the work will help them later in jobs. The boys regard the work as important to the school; the girls consider it valuable training. The boys believe that the N.Y.A. work experience will be of only slight value to them in later life. The girls, on the other hand, believe that it will be of much benefit to them. The boys believe that the work is only slightly related to their abilities, while the girls believe that it is closely related to their abilities. The benefit to the teacher and to the school is mentioned twice as frequently by the boys as by the girls.

More than three-fourths of the pupils are opposed to the extension of the program to include all pupils in school because they believe that not all the pupils need financial assistance or would appreciate it. They appear to be thinking of the program solely as a means of providing financial assistance to needy pupils.

The evaluations of the program made by the N.Y.A. pupils are summarized in Table 2.

The criticism made most frequently by both boy and girl workers is that the hours are too few; they would prefer to work more hours and thereby earn more money. Mentioned as an unfavorable aspect of the program by the girls twice as frequently as by the boys is the item "Some get it who do not need it." The girls are more critical of the planning and the supervising of the program than are the boys. The boys, on the other hand, are more critical of the type of work assigned, believing that more interesting work should be provided.

TABLE 2

PERCENTAGE DISTRIBUTION OF EVALUATIONS OF N.Y.A. PROGRAM GIVEN BY 890 N.Y.A. PUPILS

Evaluation	Percentage of Boys	Percentage of Girls
Favorable aspects:		
Provides assistance to needy	67.3	61.2
Provides vocational training	23.7	35.7
Is of benefit to teachers and school	6.6	3.1
Keeps pupils busy	2.4	.....
Total	100.0	100.0
Unfavorable aspects:		
Should provide more hours, more pay	33.8	24.3
Should provide more interesting and worth-while work	25.3	15.8
Program should include more pupils	15.8	16.4
Some get it who do not need it	9.4	17.9
Planning and supervision are inadequate	5.1	15.1
Should be defense work	4.1	.....
Checks are late	3.6	2.7
Some pupils do not earn their money	1.9	3.6
Interferes with study	0.5	1.9
Purposes not clearly understood	0.5	1.4
N.Y.A. pupils are looked down upon	.....	0.8
Total	100.0	99.9

Opinions of non-N.Y.A. pupils.—The evaluations of the program made by the non-N.Y.A. pupils are summarized in Table 3.

Three-fifths of the non-N.Y.A. pupils consider the program as a way to give money to pupils needing aid, and one-fifth consider it as an opportunity for practical training.

The non-N.Y.A. pupils do not favor expanding the program to include all pupils. The percentage of non-N.Y.A. pupils opposed is higher than that of N.Y.A. workers—about five-sixths compared with three-fourths. The principal reasons given are (1) that not all pupils need the work or would be interested in it and (2) that those who want to work can earn money outside school.

The data in Table 3 indicate that, as in the case of the N.Y.A. pupils, the non-N.Y.A. pupils regard the most favorable aspect of the program to be the financial assistance provided needy pupils. More frequently mentioned by the non-N.Y.A. group than by the N.Y.A. group is the benefit to the school. A few suggest that the program keeps pupils in school—an aspect which is not mentioned by any N.Y.A. pupil.

Most frequently given as an unfavorable criticism is that not all pu-

pils who need the help get it. As might be expected, more non-N.Y.A. than N.Y.A. pupils believe that not all workers earn their money. Others suggest that the workers should receive more than they do. More boys than girls think that the program should be eliminated during the present emergency. The boys, again to a greater extent than the girls, believe that there is no need for the program, that boys especially could get part-time jobs if they tried.

TABLE 3

PERCENTAGE DISTRIBUTION OF EVALUATIONS OF N.Y.A. PROGRAM GIVEN BY 896 NON-N.Y.A. PUPILS

EVALUATION	PERCENTAGE OF BOYS	PERCENTAGE OF GIRLS
Favorable aspects:		
Provides assistance to needy	66.3	68.9
Provides vocational training	20.3	25.5
Is of benefit to teachers and school	12.3	5.3
Keeps pupils in school	1.0	0.2
Total	99.9	99.9
Unfavorable aspects:		
Not all get it who need it	35.8	41.7
Pupils do not earn their money	14.6	7.8
Program should include more pupils	10.1	12.0
Pupils should get more money	8.0	5.2
No need for program exists; pupils could get jobs	5.8	3.6
Supervision is poor	5.8	3.1
Fosters attitude of getting something for nothing	4.9	3.6
Projects are not worth while	4.0	4.7
Should be eliminated in present emergency	4.0	0.5
Takes time from study	2.7	6.8
Purposes not clearly understood	2.2	1.6
Money earned is wasted	1.3	5.2
N.Y.A. pupils are looked down upon	0.9	4.2
Total	100.1	100.0

Opinions of supervisors.—Approximately a third of the supervisors consider the most satisfactory aspect of the N.Y.A. program to be the job-training experience provided, and approximately a fourth believe that it helps the student make better personal adjustments. In the opinion of more than a third, however, "Greater attention should be given to types of work which develop self-reliance, industriousness, and appreciation of one's own ability and worth," and approximately a fourth think that "more emphasis should be placed on the development of understanding by N.Y.A. workers of their responsibilities with respect to public service."

The most satisfactory aspects of the program in their local schools, as Table 4 shows, are (1) the financial assistance given to needy pupils and (2) the services rendered to the teacher in particular and to the school in general. In the opinion of the supervisors, the following are the least satisfactory aspects of the program: (1) Some pupils are incapable, by reason of ability or training, of doing the type of job which the supervisors wish done. (2) The attitude of some pupils is not conducive to efficiency; they exhibit a lack of interest or a tendency to feel that the government owes them a living. (3) Supervision is time-consuming. (4) The program in the school is, in some cases, inefficiently managed. (5) The funds allotted to the school for the program are insuf-

ficient to provide all the assistance needed by the school.

The supervisors, however, almost unanimously favor a continuance of the N.Y.A. program in their schools because of (1) the need of some pupils for financial assistance; (2) the values of work experience; and (3) the service rendered to the teacher, the school, and the community.

Approximately half of the officials replying state that the program is only slightly, if at all, related to community needs. The remainder are of the opinion that the community benefits indirectly because improvement of buildings and grounds is a community asset and because needy pupils have been helped to remain in school. In a few schools the program has been directly related to community needs by providing assistance in the public library, help for the county nurse, and assistance with a community lunch project.

TABLE 4

PERCENTAGE DISTRIBUTION OF EVALUATIONS OF LOCAL N.Y.A. PROGRAM BY 411 SUPERVISORS

Evaluation	Per Cent	Evaluation	Per Cent
Favorable aspects:		Unfavorable aspects (*continued*):	
Assists needy pupils	37.1	Program is inefficiently managed	13.4
Is of benefit to teacher and school	24.6	Funds are inadequate	12.5
Affords training value	21.5	Too few pupils benefit	8.1
Develops work habits	16.7	Student time allotted individual teacher is too short	5.5
Total	99.9	Purposes of N.Y.A. are not clearly understood by faculty and pupils	1.2
Unfavorable aspects:		Feeling of inferiority is developed in N.Y.A. workers	0.9
Pupils assigned are unable to do work	24.8		
Some workers have poor attitudes	18.1		
Supervision is time-consuming	15.4	Total	99.9

Opinions of school officials.—A majority of the school officials believe (1) that the N.Y.A. program is an important aspect of the total school program because it provides an opportunity for vocational guidance and affords work experience and (2) that it increases the efficiency of the school in that it relieves teachers of routine tasks, has extended the library service, has made possible the serving of hot lunches, and has brought about an improvement in buildings and grounds. In brief, many services have been made possible in the school and much work has been done which otherwise would have remained undone.

The following were the most difficult problems encountered by the officials, in order of frequency of mention: (1) Much time is consumed in supervision, in keeping records, and in making reports. (2) Some pupils are indifferent to their responsibilities; they do as little work as possible and are irregular in reporting for work. (3) Those in need of financial assistance are often the most incompetent. Considerable effort is required to

find jobs which are appropriate to a pupil's needs and interests, to make work schedules satisfactory to both teachers and pupils, and to fill requests of teachers for assistants. (4) The school lacks facilities and equipment necessary for worth-while projects.

The school officials are almost unanimous in favoring a continuance of the N.Y.A. program for three reasons: (1) It assists needy pupils who probably could not attend high school without the aid provided. (2) It assists the school in rendering many services which it otherwise could not provide. (3) It affords educational and vocational training value.

Opinions of citizens.—The final phase of the study was an attempt to determine the opinions of a representative group of people in each community concerning the efficiency of the local N.Y.A. student work program. The inquiry form was designed to determine the extent to which the N.Y.A. program meets a need in their communities, the worth-whileness of the work sponsored by the local school, and the attitude of people in the community toward the N.Y.A. program and the N.Y.A. workers.

Seven copies of the questionnaire form were sent to each official N.Y.A. representative for distribution in his community, with the suggestion that these blanks be distributed to "representative persons in as many different vocations as possible, i.e., professional person, businessman, school-board member, farmer, laborer, housewife, public official, etc." Returns were received from 226 citizens representing 70 school communities and all the suggested vocations. The majority of the respondents have lived in their respective communities for more than ten years. Only an eighth are parents of N.Y.A. workers, but more than half state that they are well acquainted with the student work program in their respective schools.

The citizens almost unanimously agree that the projects are worth while from the standpoint of the work done and the training value afforded. In the opinion of 88 per cent of the respondents, the people of the community regard N.Y.A. pupils just as they do any other pupils in the community. Only 2 per cent believe that these pupils are "looked down upon"; the remainder do not know the attitude of the community. The citizens have learned about the N.Y.A. program principally through friends and acquaintances—the pupils themselves or their relatives—for there has been little publicity in the newspapers or elsewhere concerning the aims and the methods of the N.Y.A. program.

Specific criticisms expressed by this group concerning the management and the efficiency of the local student work program are summarized in Table 5. In general these citizens believe that "the good outweighs the bad."

Eighty per cent of the respondents favor a continuance of the program primarily because until recently there has been little opportunity for the

gainful employment of boys and girls of high-school age in their communities. In addition, the program affords vocational training and benefits the school and the community. The majority of those who favor discontinuing the program do so because they think the money should be used in an all-out war effort and because there is no longer need for the assistance.

2. A criticism which is frequently made by N.Y.A. and non-N.Y.A. pupils and by citizens is that some pupils receive the aid who neither need nor deserve it.

3. Another criticism made frequently by N.Y.A. pupils, supervisors, and citizens, but less frequently by non-N.Y.A. pupils, is that the hours allotted are too few.

4. Neither the N.Y.A. nor the non-N.Y.A. pupils favor extension of the program to include all the pupils in school because not all need assistance or would profit by work experience.

5. Supervisors, school officials, and citizens, and the pupils to a limited extent, believe that the N.Y.A. program benefits the school and community. The supervisors and the school officials state that, although supervision is time-consuming, they are more than repaid by the assistance received.

6. Teachers, school officials, and citizens favor the continuance of the program because it provides aid for

TABLE 5

PERCENTAGE DISTRIBUTION OF UNFAVORABLE CRITICISMS OF THE N.Y.A. PROGRAM EXPRESSED BY 226 REPRESENTATIVE CITIZENS

Criticism	Per Cent	Criticism	Per Cent
Too many pupils are getting the work who do not need it	30.7	Teachers are being paid to do work to which N.Y.A. pupils are assigned	6.9
Better planning and supervision are needed	15.5	Some pupils have attitude of getting something for nothing	5.2
Pupils should be permitted to work more hours	13.8	Purposes are not explained to community	5.2
Some projects are not worth while	12.3	Total	99.9
Program should be extended and age limit lowered	10.3		

CONCLUSIONS

The opinions expressed by the various groups included in the study concerning the efficiency of the program may be summarized as follows:

1. The N.Y.A. and the non-N.Y.A. pupils, the supervisors, the school officials, and the citizens are in agreement in believing that the N.Y.A. program provides financial assistance to pupils who, without such help, would find it difficult, if not impossible, to attend high school. They agree also that the projects afford opportunity for the development of desirable work habits and skills.

those in need, affords work experience, and benefits the school and the community.

The program has been primarily a means of equalizing educational opportunities. Although the financial assistance provided is small, it has enabled deserving and capable pupils to remain in school and to participate more fully in the regular program of the school. Even though all-out war activity may draw into industry and military service most of the available employables, two groups will continue to need assistance: (1) youth unprepared educationally or vocationally to enter wartime industries and (2) youth living in somewhat isolated communities which lack employment opportunities for boys and girls of high-school age.

The program has also afforded opportunity for the development of desirable work habits and skills. It has not, however, reached a stage of purposeful and careful planning by school people. School officials have attempted to make the work fit into the immediate administrative and teaching needs of the particular schools. Consequently some types of work, so far as the pupil is concerned, are of dubious value educationally and vocationally.

AN ANALYTICAL APPRAISAL REPORT OF PUPIL PROGRESS

E. C. BOLMEIER
Public Schools, Jackson, Mississippi

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CRITICISMS OF THE TRADITIONAL REPORT CARD

THE traditional report card, on which a single composite mark is recorded for each of the school subjects pursued, is rapidly losing favor in the progressive school system. Whether the mark is in terms of a numeral, percentile rank, quartile, alphabetical letter, or an isolated word such as "satisfactory" or "unsatisfactory," it is inadequate in revealing specific and significant information regarding school progress.

The various factors which a teacher usually takes into consideration in the issuing of school marks are not necessarily correlative. Therefore a single mark, such as A, B, C, D, or F, does not reveal the teacher's appraisal of the pupil's comparative accomplishments and attitudes. Moreover, there is variation in the importance that teachers attach to certain accomplishments and attitudes. Factors which are influential for some teachers in the determination of single composite marks are discounted or even disregarded by others.

That single marks frequently represent the teachers' variable interpretations of the meaning of school marks rather than the pupil's actual comparative accomplishments was revealed in a recent experiment.[1] Twenty-four persons were requested to issue marks in terms of the traditional symbols (A, B, C, D, and F) to several hypothetical pupils for whom descriptive data were supplied. There was much discrepancy in the marks issued to these hypothetical pupils, one pupil being assigned all five of the possible marks.

Not only is the traditional marking and reporting system inadequate and unreliable in informing pupils and parents of relative accomplishments, but it fails to yield a pattern of information which is essential for effective pupil guidance. If school marks are to be useful in the guidance and counseling of pupils, they must be analytical enough to indicate the teacher's appraisals of such uncorrelative factors as aptitude, attitude, effort, and various scholastic accomplishments.

FACTORS FOR APPRAISAL

In the development of a system for reporting pupil progress to parents, the question arises as to how complete and specific the report should be. The amount of time available to the teachers for assembling and reporting vari-

[1] E. C. Bolmeier, "What's in a Mark?" *School Executive*, LXII (May, 1943).

ous phases of pupil progress and the relative resources of the school for supplying printed materials are determinants in the selection of factors to be reported.

Obviously there would be considerable merit in a detailed reporting system, however, would be expensive both in the time required of teachers for making out the reports and in the cost of different report forms on which the appraisals would be made. The average school system would do well to provide a uniform report form which

JACKSON SECONDARY SCHOOLS — APPRAISAL REPORT
JACKSON, MISSISSIPPI
J.P.S. FORM 36

School .....
Pupil ..... Subject .....

Factors To Be Rated	Very High	High	Average	Low	Very Low
Achievement on tests					
Quality of recitation					
Quality of completed assignments					
Promptness in completing work					
Persistence for mastery					
Self-reliance in work					
Application during study					
Attention to class activities					

Comments (if any) on back of sheet

..... Date ..... Instructor

FIG. 1.—Appraisal Report used in secondary schools of Jackson, Mississippi

tem which would provide different report forms for the various school subjects in which pupil progress is appraised. Specific objectives which are inherent in various subjects could then be listed on the report form, opportunity thus being afforded to appraise the attainment of objectives as they pertain to a specific course. This system would list the most significant factors of appraisal applicable to most of the school subjects.

The "Appraisal Report" form reproduced in Figure 1, which was recently devised and is now in use in the public secondary schools of Jackson, Mississippi, provides for rating the pupil on eight factors. All the factors

are applicable to the majority of school subjects. If a certain factor is not applicable, a rating may be omitted. Omission of a rating on an inapplicable factor does not affect the comprehensiveness or completeness of the report.

Achievement on tests.—This factor pertains to the accomplishments on daily quizzes, oral tests, unit tests, weekly tests, term tests, or other periodic tests given at the discretion of the instructor. Results of final comprehensive examinations administered at the end of a course are not incorporated into the rating shown on the Appraisal Report since they are recognized elsewhere. The instructor obviously must determine his own system of accounting the results of various tests which are determinants of the first factor rated.

Quality of recitation.—This factor is especially applicable to those subjects in which pupils are required to carry on class discussion and to respond orally to questions submitted by the instructor. In those subjects, such as art or shop, in which the pupils may not often be called on for recitation, a rating may be omitted.

Quality of completed assignments.—This factor is applicable to practically every subject taught in the secondary schools. In such subjects as English or social science the assignments may be in the nature of written work; in mathematics the assignments usually have to do with the presentation of solutions to assigned problems; and in shop, fine arts, or home arts the assignments pertain to projects on which the pupils are working.

Promptness in completing work.—This factor is quite different from the preceding factor. Very frequently a boy or girl who does excellent school work from the standpoint of quality may be consistently late in completing it; in other cases the situation may be reversed.

Persistence for mastery.—This factor should be distinguished from the third factor, "Quality of completed assignments." In numerous instances there may be a persistent effort on the part of the pupil to gain mastery over assigned work even though his actual achievement may not be superior, in the eyes of the instructor, when compared with the accomplishment of other pupils in the class.

Self-reliance in work.—This factor should not be ignored in appraising pupil progress. It is important that boys and girls be taught to rely upon themselves in performing school work. The pupil who consistently depends on the instructor or on fellow-pupils to help him in completing school work is not developing the worthy characteristic of self-reliance.

Application during study.—A rating on this factor may appear difficult to determine because it is impossible for an instructor to observe the pupils when they are doing much of their studying. Nevertheless, application in study is frequently reflected by the ranking on other factors. Moreover, in many classes considerable study is supposed to be carried on in the presence of the instructor.

Attention to class activities.—A separate rating on this factor is important

because it reveals the pupil's attitude and behavior. Lack of attention to class activities may frequently be the explanation for unsatisfactory school accomplishment. Moreover, a separate rating on this factor should be a stimulus for a pupil to conduct himself in a manner which will create satisfactory class situations for himself, his fellow-pupils, and the instructor.

RECOGNIZING ACHIEVEMENT AND EFFORT

One of the problems of a marking and reporting system is to provide for both achievement and effort. Many educators believe that some credit should be given to the pupil who applies himself in his school work even though he may be lacking in scholastic aptitude. It should be noted that the Appraisal Report recognizes both effort and achievement. Ratings on the first three factors are determined largely by aptitudes, and pupils lacking the inherent scholastic aptitudes are likely to rank low in these factors despite applied effort. Ratings on the last five factors, however, are determined almost entirely by the attitude and determination of the pupil. The pupil who is somewhat handicapped by lower scholastic aptitudes can, therefore, compensate by determined application, and, conversely, the mentally superior pupil will be penalized for lack of optimum application even though he may rank high on the first three factors of the Appraisal Report.

DISTRIBUTION OF RATINGS

If the Appraisal Reports are to be meaningful, there must be some degree of uniformity among the various departments and among the instructors of a single department with respect to the distribution of ratings. As a general guide it may be stated that for average classes approximately 10 per cent of the ratings fall in the "very high" column; the next 20 per cent, in the "high" column; the middle 40 per cent, in the "average" column; the next 20 per cent, in the "low" column; and the last 10 per cent, in the "very low" column.

It should be stressed that the suggested distribution pertains to an *average* class and not necessarily to a specific class. It is quite conceivable that a specific class of thirty pupils might be unusually superior and that most of its members would be checked in the "very high" and "high" columns, or that for an unusually inferior class most of the checks would be given in the columns at the other end of the scale. An instructor who has taught classes in a certain subject for a number of years would rate each pupil according to his standing in all the classes that the instructor has taught and not according to his standing in the particular class in which the pupil was enrolled. It is a well-known statistical fact that the normal curve is most operative in a rating procedure when many cases are included in the distributions.

If the instructor deems it desirable to write comments on the back of the Appraisal Report to explain or to supplement the ratings, he may do so. It is conceivable that a pupil may rank low on some of the factors because of

frequent absences from classes, defective vision, reading and speech defects, fatigue, or other causes which are observed by the instructor and which should be brought to the attention of parents. It is also possible that an instructor might wish to give some verbal explanation of a pupil's "very high" rankings on some of the factors.

FREQUENCY OF REPORTS

One of the primary considerations in the establishment of a reporting system has to do with the frequency of reports. Consultations with various departments in the school indicate that teachers do not agree on the number of reports of pupil progress that should be sent to parents in a year. There is agreement, however, that the more detailed the report is to be, the less frequently teachers can prepare it without detracting from the time which might be spent in important teaching functions.

After due consideration of the relative values, it was decided that in the Jackson secondary schools Appraisal Reports would be submitted four times a year at nine-week intervals. At the end of the first nine-week term the Appraisal Reports for the subjects being pursued are inserted in a special envelope and given to the pupil, who is requested to take the reports home to his parents. An explanation of the Appraisal Reports is printed on the envelope, and parents are requested to retain the envelope so that subsequent reports may be retained, filed, and occasionally studied.

Teachers as well as parents express a belief that nine weeks is too long to wait before informing the home that a pupil is doing unsatisfactory school work. It is true that nine weeks, or even one week, is too long to wait, particularly if the unsatisfactory work is due to the pupil's attitude or to a lack of application on his part. As soon as it becomes absolutely evident to the teacher that a pupil is wilfully neglecting to do satisfactory school work, the home should be notified immediately. Therefore the high schools of Jackson supplement their term Appraisal Reports with a special report, shown in Figure 2, which is designed to provide immediate information that will tend to bring the pupil, parent, and teacher together for mutual consideration of an unsatisfactory situation and of means of making a co-operative effort to remedy it. These special reports are prepared at the discretion of the respective teachers and are submitted to the principal's office, whence they are mailed to the parents.

OFFICE RECORDS OF APPRAISAL REPORTS

It is necessary to retain in the principal's office some record of the Appraisal Reports which are sent to the parents and retained in the homes. Therefore an "Annual Composite Appraisal Record" has been devised, on which the pupil's "point credits" are shown for each subject and each term.

Transmuting ratings to average point credit.—Because of space, it would be difficult to reproduce all the rating

checks of the various term Appraisal Reports on the Annual Composite Appraisal Record. Moreover, a composite value of the various ratings would be difficult to determine. Therefore the ratings are transmuted to point credits on the following basis: "Very high" = 5, "High" = 4, "Average" = 3, "Low" = 2, and "Very low" = 1. It is obvious, then, that the average point credit may always be computed by finding the numerical total of values recorded and dividing the total by the number of factors on which the pupil has been rated.

A hypothetical case will explain the procedure of determining average point credits from the ratings. A pupil who has been rated "high" on the first three factors, "average" on the fourth and fifth factors, "very high" on the sixth factor, and "low" on the last two factors would receive point credits of 4, 4, 4, 3, 3, 5, 2, and 2, respectively, for the factors rated. Since the numerical total of point credits is 27 and all eight factors are rated, the average point credit, which is found by dividing 27 by 8, would be 3.38.

Marks for permanent records.—Because colleges still require transcripts of credits in terms of the alphabetical symbols, high schools have no alternative but to supply such traditional appraisals of scholastic accomplishments. Therefore marks of A, B, C, D, and F are computed from the average point credits and are recorded on the permanent records. It is emphasized, however, that such marks are not to be used in reporting progress to pupils or to parents. The periodic Appraisal Reports reveal pupil progress in a more meaningful and detailed manner than do such symbols. The only information, other than the ratings and comments on the Appraisal Reports and the special reports for failing students, having a semblance of a "final mark" is a statement stamped on the back of

J.P.S.

JACKSON SECONDARY SCHOOLS

JACKSON, MISSISSIPPI

SPECIAL APPRAISAL REPORT

School ..... Date .....

Parent or Guardian .....

..... is doing unsatisfactory work in

..... Since this fact is already evident we are not waiting until the regular term Appraisal Reports are due to inform you. It is hoped that you will discuss the matter immediately with (him, her) in order to aid the school in improving the situation.

Principal .....

FIG. 2.—Special report used in secondary schools of Jackson, Mississippi

the last Appraisal Report of the school year, which specifies whether the course has been satisfactorily passed.

Credit of final examinations.—The weight of the final examination in computing final marks is left to the discretion of the various departments. The instructors in the mathematics department have decided to weight the score on the final examination as 50 per cent of the composite final mark. Other departments believe that final examinations should not count that much in computing a final mark.

The Cooperative Achievement Tests are employed in the Jackson secondary schools. Since these tests are provided with norms in terms of scaled scores and percentile ranks, the selection of a divisor for the scaled score or percentile rank determines the weight of the final examination in the computation of a final mark. If a weighting of approximately 50 per cent has been decided on, the scaled score may be divided by 20 and the quotient added to the average point credit calculated from the ratings of the Appraisal Reports.

Suitable standardized achievement tests are not available for all the high-school subjects. In such cases local nonstandardized final tests are devised on a 100-point scale, so that the highest possible score on the examination would be 100 and the lowest possible score would be zero. The pupil's final examination score is then divided by 20, or some other selected divisor, and the quotient is added to the average point credit to compute a final mark.

For those subjects in which no final examinations are administered at all, the average point credit is the sole basis on which final marks are computed.

Computation of final marks.—Near the close of the school year (or the semester for half-unit subjects), each instructor prepares a range distribution of accumulated credits derived by adding average point credits to final-examination quotients, if final examinations are given. The instructor then exercises his own discretion in drawing the lines in the distribution to specify which values are to be recorded as A, B, C, D, and F on the permanent record cards.

In order to clarify this feature of the marking system, a hypothetical list of scores is shown in Table 1. The accumulated credits are derived by adding average point credit to final-examination credit. For example, the first pupil has an average point credit of 4.62, which is determined by the ratings on the Appraisal Reports, and a final-examination quotient of 4.66, which is obtained by dividing the scaled score on the standardized examination by 20. The total accumulated credit is 9.28.

The point is stressed that it is the instructor who determines where the lines are drawn which specify the marks of A, B, C, D, and F. It is not likely that many distributions would follow the normal-curve method of marking as closely as is indicated for the hypothetical class presented. However, when the various sections of the

same subject, taught by the same teacher, are combined into a single distribution, the normal-curve procedure becomes more operative and valid. Instructors who teach more than one section of the same subject and class should combine all scores in a range distribution before computing the marks for the permanent records.

TABLE 1

DISTRIBUTION OF ACCUMULATED CREDITS IN ONE CLASS

Pupil	Accumulated Credit	Final Mark
1	9.28	A
2	9.16	
3	8.96	
4	8.67	B
5	8.60	
6	8.48	
7	8.32	
8	8.25	
9	8.24	
10	8.23	
11	8.14	C
12	8.13	
13	8.13	
14	8.08	
15	8.07	
16	8.04	
17	8.01	
18	7.92	
19	7.87	
20	7.71	
21	7.69	
22	7.51	D
23	7.42	
24	7.21	
25	7.09	
26	7.01	
27	6.88	
28	6.47	
29	5.09	F
30	4.80	
31	3.26	

The significant feature of this plan which distinguishes it from many marking practices is that final marks are determined by objective data which have accumulated over the school year rather than by sentimental or partial reasons. This fact should be a protective feature for principals and teachers in dealing with disgruntled pupils and parents who suspect that certain pupils have been discriminated against for personal reasons.

Utilizing records for counseling and interviewing.—The Annual Composite Appraisal Record provides cumulative data which are valuable for the counseling of the pupil and the interviewing of parents. Since a pupil's progress is appraised and recorded on the basis of eight significant factors for each school subject four times a school year, a pattern of information evolves which is far more revealing than a series of single composite marks.

An analysis of data which have been recorded on the Annual Composite Appraisal Records already indicates comparative interests, aptitudes, and attitudes of pupils toward the various school subjects. On the basis of such information the pupils can be given effective vocational and educational guidance. Moreover, on this annual record, information concerning pupil progress is arranged in such an order that it can be readily utilized by principals in conferring with parents who request interviews.

INFLUENCES IN THE ADOLESCENT YEARS OF ARTISTS

MARGARET L. TRIPLETT
Norwich Free Academy, Norwich, Connecticut

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PROBLEMS OF STUDY

IN THE face of much writing on art and art education it has seemed important to one art teacher to ask, not, "What do teachers and schools say about art education?" but, "What influences actually have formed the artists of our time?" Known facts of the adolescent years of artists of the nineteenth and twentieth centuries have some implications for the teaching of art at the secondary-school level. Certain circumstances which have contributed to the development of artists may prove to be of value in clarifying the objectives of art education and in suggesting the means by which creative gifts are cultivated.

Even though the secondary school is not primarily concerned with the fostering of artists as artists, knowledge of the way in which artistically productive individuals have grown up is of value to the teacher of secondary-school art. As Arthur Pope[1] suggests, expression in art should be as natural to the average pupil as experience in reading and writing. In a society which encouraged the cultivation of artistic capacity, especially gifted individuals might be expected to appear, together with a public possessed of a background for appreciation of art.

The school must consider first the education of the adolescent as an individual. It must provide for the awakening of his interests and abilities as these may be developed through the media of art expression and through contact with fine examples of the visual arts. To this extent art may play a role in the general education of the individual. The second part of the problem of art-teaching in the high school is the matter of fostering something which deserves the name of art. Unless a program of education results in the production of something genuine in expression or in understanding, the effort is worse than useless, is indeed pernicious. Much activity carried on in some schools today under the name of "art" has nothing to do with either art or education; it serves, rather, to confuse and blind the student to true art values.

The problems involved in providing "art for everyone" rarely find completely successful solution at the high-school level. At adolescence many children who once liked drawing appear to lose interest. Pressure of other

[1] Arthur Pope, *Art, Artist, and Layman*, pp. 10 ff. Cambridge, Massachusetts: Harvard University Press, 1937.

activities, self-consciousness, and depreciation of their own abilities halt many at this age. What forces have urged some individuals toward special creativity at this time? What has made the transition from childish expression to mature production relatively easy for some?

SCOPE OF STUDY

The early lives of artists furnish valuable clues to the answers to such questions. In the preparation of this article the biographies of more than a hundred American and European artists of the nineteenth and the twentieth centuries have been searched for indications of specific influences in formative years. Facts about their early drawing, about the schools attended and other teaching received, the attitudes of parents and other associates, literary and artistic opportunities, travel, and other circumstances of environment have been studied. The ages from twelve to twenty-five have been most specifically considered.

The individuals chosen for investigation were selected partly because published information about them is available. They are primarily painters, or men known chiefly for their painting, although some sculptors, illustrators, and others have been included. All of them have done work involving the elements of visual art; all of them have made use of drawing in some medium. The list might be divided arbitrarily into three groups.

One group would be composed of artists who, by general consent, are considered to have contributed to the evolution of painting during the past century. Most of these are the European painters discussed in every history of the art of our time. An abundance of biographical material about this group makes them most profitable for study, and this nucleus of artists of proved achievement provides comparison with the other individuals studied.

Most of the second group are American painters, many of them living today. While it is much more difficult to assign to them a place of importance in the history of art, the mere fact that they have grown up under conditions similar to those surrounding present-day students makes them particularly interesting. All of them may be considered to belong to the category of individuals especially gifted in the potentialities of the visual artist. All of them have chosen some form of expression in art media as the profession of their mature years. The steps which have led to this choice and the abilities which have made them worthy of notice admit them to this inquiry.

The remainder of the list is composed of persons who would not be considered creative artists of the caliber of those in the first group or of most in the second group. They have evinced interest in the visual arts; they have followed the methods of those who have gone before. They may be considered "competent" painters in the academic sense, but they have made no recognized contribution to the progress of their art. Little

original thought characterizes their work. Some of them have written extensively about their own lives. From the standpoint of this inquiry, it has been illuminating to discover whether their early environment showed any marked difference from that of more original painters.

EARLY DRAWINGS

Since most children draw, it is not necessarily significant to find that the artists tended to draw at a very early age. In almost every instance in which the childhood of the artist is described, evidence of early drawing is produced. Writing of Cézanne's pleasure in a box of colors given to him when he was a child, Cogniat calls attention to the "many honest merchants and meticulous bookkeepers [who] have taken pleasure in drawing pictures in their school copy-books"[1] without materially affecting the course of art. Nevertheless, early contact with an activity and pleasure in that activity tend to promote interest in it. About many of the artists it is said again and again that they were forever drawing, that they cared more for drawing than for anything else.

Approximately a quarter of the artists studied were decidedly precocious in this regard. They passed very early from the haptic or schematic expression of the average small child to a visual type of representation. Since this transition was largely accomplished before the years of adolescence and was usually accompanied by praise and appreciation, the youth received a strong impetus to continue such pursuits. Gertrude Stein comments, "Picasso wrote painting as other children wrote their A B C."[2] At fourteen he had command of a mature technique. Of some few painters it is reported that youthful drawing was not a common activity. In his childhood van Gogh very infrequently occupied himself spontaneously in modeling or drawing, but apparently his rare creations were unusually expressive. Whether an artist began his activity early or late, at some point in his development the making of innumerable drawings has been indispensable to his progress.

The question of what the artist draws is important also. Early drawings reflect the normal interests of childhood and the special interests of the individual. They are purposeful representations of people and animals and places, either those which are within the knowledge of the child or those which are visualized as his imagination is kindled by story and history. At adolescence the artist's interest in natural phenomena may be great. Detailed studies of plants, animals, and other closely observed objects may occupy him as he endeavors to give solidity and concreteness to his work. At this age reality is usually the artist's preoccupation, even in the case of artists little concerned with

[1] Raymond Cogniat, *Cézanne*, p. 10. New York: French Library of Fine Arts, French and European Publications, Inc., 1939.

[2] Gertrude Stein, *Picasso*, p. 2. London: B. T. Batsford, Ltd., 1938.

realism in their later work. A desire to record rare and beautiful things which an artist has seen has often been the starting-point for painting. It may amount to a naturalist's passion, as in the youth of Audubon; it may take a romantic and imaginative form, as in the case of the young Burchfield.

With few exceptions, the artists under consideration knew before they were twenty that some form of art was to be their chosen vocation. This decision taken in adolescence led most of them to definite study of drawing. The life-circumstances of Henri Rousseau and John Kane prevented them from exercising any inclination they had toward painting until later years, but almost all the other painters were working in their chosen medium long before the age of thirty.

INFLUENCE OF ENVIRONMENT

Intense interest in nature and other visual surroundings characterizes the early years of most artists. This fact, which is discoverable from the biographies examined, has been stressed by Meier[1] in writing about the components of artistic aptitude. He calls this interest a notable characteristic of talented children and considers it of great importance. His findings with regard to the unusual retention of visual images, as well as the more careful observation evidenced by those of artistic aptitude, are amply substantiated by the lives of many painters. It does not seem uncommon for visual stimuli to be remembered over many years and to form the basis for work in later life. Not a few painters, like Grant Wood, found their most congenial means of expression when they looked for inspiration in scenes closely observed in youth.

The strong impression made by nature upon the adolescent is often reinforced by change of scene. Travel appears to stimulate the awakening of the visual sensitivity of the artist. Sometimes early travel finds nostalgic echo in later works; sometimes travel provides opportunities for seeing works of art. A large number of American artists profited in one way or another from travel in Europe before the age of twenty-five. The European artists tended to gravitate toward Paris or other large cities where opportunities for seeing pictures were plentiful. Some of them found inspiration in the scenery of countries outside their own.

Since past experiences enter into creative imagination and greatly influence later expression, it is instructive to discover that the great majority of the artists studied had special opportunities for seeing paintings and other works of art. Undoubtedly they were stimulated by these experiences. Autobiographical writings again and again make mention of seeing paintings or reproductions, of copying pictures, of being unusually excited by the work of some particular artist. Some

[1] Norman C. Meier, "Factors in Artistic Aptitude: Final Summary of a Ten-Year Study of Special Ability," *Studies in the Psychology of Art*, III, 140–58. University of Iowa Studies in Psychology, No. XXIII. Psychological Monographs, Vol. LI, No. 5. Columbus, Ohio: American Psychological Association, Inc. (Ohio State University), 1939.

artists went to great lengths to gain opportunity to visit museums and exhibitions. The thirteen-year-old Renoir, forgoing his lunch to draw in the Louvre, is not an isolated case. It would seem that the students who grew up with easy access to great work found it somewhat easier to form their own early styles, and perhaps to aim higher in their ambitions, than did those who were inspired solely by illustrated magazines and reproductions. At least from available evidence it is clear that seeing pictures is necessary nourishment for those who are to make them.

Early interest in art often encompasses more than one form. Many of the artists were devoted to music, poetry, literature, the theater. Sometimes these influences were of the utmost importance in forming the taste of the individual. At least half of the artists studied evidenced in their mature work a reflection of these early interests. In some cases subject matter and style derive directly from such sources, perhaps rediscovered or reverted to after a period of experiment in other directions.

To the influence of nature and of art in the development of the artist must be added the influence of people. Not infrequently parents, relatives, or family friends were amateurs or professionals in one of the arts.[1] Early acquaintance with the materials of the artist and opportunity to see and discuss art products "in the making" surely must provide a mental climate congenial to the potential artist. In some cases contemporaries of similar interests provided this contact. Youthful friendships among artists seemed to be very influential and lasting means of mutual inspiration. The well-known friendship between Cézanne and Zola represents another type of early association not uncommon in the lives of the painters studied. Literary influences of one sort or another have aided in the unfolding of personality.

Contact with ideas, above and beyond the commonplace, has been indispensable to the artists' development. Sometimes it was an older person, perhaps a relative, or an early teacher, who provided the necessary introduction. In the case of certain artists who were brought up simply and in humble circumstances, this influence is particularly noticeable. Millet provides an example. A grandmother of unusual character, a sympathetic village priest, and a father who respected his son's talent—all helped to encourage reading and thinking which put the boy Millet far beyond the average peasant in education and understanding before he left his home to learn the painter's craft.

Popular conception sees the artist as a rebel, pursuing a Bohemian course in opposition to his parents' wishes. Opposition has been met in some cases, but in a greater number the youthful talents have been encour-

[1] Meier (*op. cit.*, pp. 141–43) found that craftsman ancestry was a possible determinant of artistic ability. He considers this from the standpoint of heredity. It may be noteworthy also as a factor in environment.

aged by sympathetic parents. The disapproval of one parent frequently has been offset by the understanding of the other or by special help from another relative. In a few cases, such as that of Guy Pène duBois, the decision of the father determined the course of the young painter. It would seem that, among the artists studied, few Americans met with serious parental opposition in their desire to study art, while the Europeans more frequently were delayed somewhat until such opposition was overcome. Even among the Europeans, however, the majority were aided and encouraged by their own families.

Approval of art study usually meant financial aid from parents, but about half of the artists did something to contribute to their own support during adolescent years. Some of them were able to do so through their drawings or by some sort of art activity. Some worked at crafts which added to their manual skill. A number of the American artists were cartoonists or illustrators at an early age.

EDUCATION OF ARTISTS

As adolescents, almost all the artists were eager for instruction in drawing, painting, and related practices. How strongly they felt the need for help and direction at this period is proved by abundant evidence. Work and sacrifice frequently were necessary to enable them to obtain art-school training. A large number studied for varying lengths of time in regular art schools either in Europe or in America. Others entered the studio of an artist as a substitute for formal schooling or as a supplement to it. The Americans, with great unanimity, availed themselves of opportunities to study in the art schools of this country. The Art Students' League of New York, the Pennsylvania Academy of Fine Arts, and the Art Institute of Chicago are most frequently mentioned. Often the students worked in more than one school and sometimes with a special teacher as well. The length of time spent in art school varied greatly.

Art schools or teachers were disappointing in many cases, and rebellion against cut-and-dried instruction and the banality of school practices is not uncommon in the experience of the more original individuals. Statistically, this circumstance is offset by the fact that many found understanding and special encouragement from some teacher encountered at this period. Another benefit often derived from art school was the opportunity to meet other students, to form friendships with contemporaries of similar interests. When teachers did not provide the help expected and desired, much could be learned from other students. Theories formed in the eager discussions and disputes of youth many times bore later fruit.

Not much mention of art instruction in secondary schools is made in the biographies studied. Art was rarely a subject of the regular curriculum. More frequent mention is made of punishment for drawing in the time

specified for other studies. In a few cases art instruction from local teachers was permitted at this age. Only in occasional magazine articles written by American artists of the most recent generation have high-school teachers of art been given credit for vital help in development of art interests.

The exact value of the instruction received in the various schools and studios mentioned is impossible to determine. Some of the artists declared themselves to have been entirely uninfluenced by early training or to have found the need for rebelling against it. Charles Sheeler expressed one viewpoint when he said, "Perhaps the greatest value of art-teaching is that the pupil may later have something to unlearn."[1] Certainly the truly creative artists were not content to learn the formula of a school or a master and to repeat it unchanged. Some formed their mature styles through a reaction to the methods and techniques which they learned first; others developed through growth based on these early influences.

Few of the total number of artists can be considered wholly or even principally self-taught, but in every case self-education was a very important factor. In addition to the incessant drawing already mentioned, most of the artists studied or copied in the Louvre or elsewhere, exchanged ideas with fellow-students, and were influenced by current theories and contemporary exhibitions. Formal teaching was, in the case of every artist who attained distinction, supplemented by much self-directed activity. Persistence and concentration of energies in carrying out his own work is a characteristic of the potential artist.

In relation to the matter of early art instruction, it is interesting to try to discover the part which prizes and scholarships played in encouraging artists who later proved themselves. Too little exact information is available to draw certain conclusions, but it would seem that, in the case of the European artists of the period studied, very few of the distinguished painters won student prizes or were aided by scholarships, the prizes generally falling to others who are being forgotten by the history books. Of the contemporary Americans, most of whom have yet to prove their places in history, a much larger number were encouraged by prizes in their student days, and many more profited by scholarships for study or travel. Quite naturally, competitions academically controlled, as they were in France, rarely benefited artists of "advanced" inclinations. In America there has been little uniformity of standard, but, with some exceptions, prizes tend to promote conformity to tradition.

The general education of the individuals studied seems to have been an important contributing factor in their artistic development. It has already been indicated that contact with ideas was necessary for their advancement, and it is not surprising to find that

[1] *Charles Sheeler: Paintings, Drawings, Photographs*, p. 10. New York: Museum of Modern Art, 1939.

most of the artists had better-than-average general education. About a third of them had a college education; more than half of the remainder of the group had a high-school education or its equivalent; some had private instruction; only a very small percentage were handicapped by a really meager education. Self-education supplementing formal schooling frequently produced highly cultivated individuals, with interests in science, literature, and other activities which, in many cases, can be seen as influences in their work as artists. While a few, like Thomas Benton, resisted early "cultural influences" presented in unpalatable form, others were consistently brilliant in school and avid for information of all sorts.

In no case is there evidence that the artist was of less-than-average intelligence. The psychologists' conclusion that there is a tendency for a higher-than-average degree of general intelligence to accompany artistic superiority is amply substantiated by indications from the lives of the artists under consideration.

INHERENT ARTISTIC ABILITIES

This fact leads again to the matter of inherent abilities as determining factors in the production of the artist. It must be recognized that individuals start with different inherited characteristics and that these undoubtedly affect the ease with which they adopt the tools of the artist and the progress which they make. Some are more sensitive to visual experiences than are others. To this extent, clearly, the artist is "born, not made." Some of the abilities of the artist are the inheritance of every individual. Moholy-Nagy has expressed the belief of the art teacher in these words:

> Everyone is equipped by nature to receive and assimilate sensory experiences. Everyone is sensitive to tones and colors, has sure touch and space reactions, etc. This means that by nature everyone is able to participate in all the pleasures of sensory experiences, that any healthy man can also become a musician, painter, sculptor, architect, just as when he speaks, he is "a speaker." That is, he can give form to his reactions in any material.[1]

There is a difference between this kind of creative activity, which is within the capacity of everyone, and the high attainment which makes the specially gifted individual the instrument of expression, not for himself alone, but for his time. The difference, however, would seem to be one of degree, not of kind. Even the artists and craftsmen who are stigmatized as "academic" rather than original or whose works seem fettered by mediocrity of taste, apparently have had in youth the same urges which goaded the greatest.

"Artistic temperament" is another part of the problem of interlinking heredity and environment. Granted the sensitivity which attends special ability, it would nevertheless appear that particularly unpleasant manifes-

[1] L. Moholy-Nagy, *The New Vision*, p. 15. Translated by Daphne M. Hoffmann. New York: W. W. Norton & Co., Inc., 1938 (revised).

tations of "temperament" are more likely to be products of environment. Emotional instability marks few of the artists under consideration. In fact, extraordinary powers of concentration and perseverance, even in the face of obstacles, are more common. George Grosz "working like a bee" is representative of the habits of industry and of the organized drive that are characteristic of the creative personality in adolescence.

CONCLUSIONS

Acting with the inherited ability and the energy of the artist are the environmental factors which limit or foster his development. Many of these are outside the province of the school. The important influence of parents and family life finds no substitute in teachers and school. Some of the circumstances of living, such as opportunity for extensive travel or long, enjoyable contact with nature, cannot ordinarily be controlled by an educational institution. Much of the definitive "bending of the twig" has been accomplished by environment before the child is of secondary-school age. Yet at this period he is very susceptible to certain kinds of influences.

Conclusions which may be drawn from the study of the adolescent years of artists indicate a long list of influences contributing to the maturing of creative individuals, all of which are, to some extent, within the power of the school to provide. The artists of our time have needed:

1. Opportunity for, and satisfaction in, art activities, particularly drawing, which is fundamental to all the visual arts.
2. Opportunity for pleasurable contact with works of art, both contemporary and past.
3. Stimulating experience through environment. This stimulation may mean travel or simply awareness of immediate surroundings.
4. Contact with creative personalities, both contemporaries and older persons.
5. Contact with many kinds of knowledge (literature, history, science, and other arts) which stimulate the imagination.
6. Understanding guidance, encouragement, and assistance in self-evaluation. The artist usually is torn between assurance of his own superiority and active discontent with his own work.
7. Systematic instruction in fundamentals of design, drawing, and related crafts. Opportunity for mastery of technical means is a need of the adolescent.
8. Encouragement to do independent work, develop critical judgment, and assume responsibility. Since creative work means his own, genuine work, the artist must begin early to think and work independently and to set his own standards high.

The indications are that, when environment is favorable, the potential artist can, during adolescence, acquire greater technical skill and better emotional and mental background for his work than our present system of education encourages. The generalizations given above from the experiences of artists may suggest procedures beneficial to the development of creative ability of any degree, whether the purpose is to provide general education for the average individual or to encourage potential genius.

SELECTED REFERENCES ON EDUCATIONAL PSYCHOLOGY

G. T. BUSWELL AND MANDEL SHERMAN
University of Chicago

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AN EXPLANATION should be made of the fact that some of the books and articles which belong in the field of educational psychology are not included in this summary. A number of studies of learning, mental growth, and individual differences in preschool children are included in the list of references on preschool education. Again, a number of studies in learning in the school subjects or the psychology of the school subjects are included in the lists of selected references on the school subjects. It was thought best to include these studies in the lists mentioned in order that the needs of persons interested in those subjects would be adequately met.

The bibliography covers the period January, 1942, to December, 1942, inclusive, with two publications from 1941 received too late to be included in the list for that year.

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LEARNING[2]

344. BRUCE, WILLIAM F., and FREEMAN, FRANK S. *Development and Learning.* Boston: Published for Reynal & Hitchcock by Houghton Mifflin Co., 1942. Pp. xx+552.

A general treatment of learning, emphasizing its relation to scientific studies of human development.

345. MCGEOCH, JOHN A. *The Psychology of Human Learning.* New York: Longmans, Green & Co., 1942. Pp. xviii+634.

A comprehensive treatment of human learning which emphasizes experiments of theoretical interest more than practical applications to school problems.

[1] See also Item 596 (Meier) in the list of selected references appearing in the November, 1942, number of the *Elementary School Journal.*

[2] See also Item 433 (*The Psychology of Learning*) in the list of selected references appearing in the September, 1942, number of the *Elementary School Journal* and Item 33 (Hoban) in the January, 1943, number of the *School Review.*

Individual Differences

346. Abel, Theodora M., and Kinder, E. F. *The Subnormal Adolescent Girl.* New York: Columbia University Press, 1942. Pp. xii+216.

A study of adolescent girls whose intelligence quotients range from 50 to 90. Deals with the problem from the point of view both of society and of the individual.

347. Heider, Fritz, and Heider, Grace Moore. *Studies in the Psychology of the Deaf*, No. 2. Psychological Monographs, Vol. LIII, No. 5, Whole No. 242. Evanston, Illinois: American Psychological Association, Inc., Northwestern University, 1941. Pp. x+158.

A study of the language and the social behavior of young deaf children and of the adjustment of adult deaf persons.

348. Hollingworth, Leta S. *Children above 180 IQ (Stanford-Binet).* Yonkers-on-Hudson, New York: World Book Co., 1942. Pp. xviii+332.

Based on case studies of twelve very exceptional children known to the author for a considerable number of years. Also includes several of the author's published papers.

Child Development[1]

349. Bakwin, Ruth Morris, and Bakwin, Harry. *Psychologic Care during Infancy and Childhood.* New York: D. Appleton–Century Co., Inc., 1942. Pp. xvi+318.

An evaluation, presented in a nontechnical manner, of the problems of the psychological care of young children.

350. Cole, Luella. *Psychology of Adolescence.* New York: Farrar & Rinehart, Inc., 1942 (revised). Pp. xviii+660.

A discussion of the various areas of the psychology of adolescence.

351. Kanner, Leo. *Child Psychiatry.* Springfield, Illinois: Charles C. Thomas, 1942. Pp. xviii+528.

Presents the problems of children from the psychiatric point of view, with predominant emphasis on the psychological aspects of behavior.

352. Morgan, John J. B. *Child Psychology.* New York: Farrar & Rinehart, Inc., 1942 (third edition). Pp. xviii+588.

A discussion of child psychology, especially with reference to the forces involved in child development.

Mental Growth[2]

353. Bodman, F. H., and Dunsdon, M. I. "Juvenile Delinquency in War-Time: Report from the Bristol Child-Guidance Clinic," *Lancet*, CCXLI (November 8, 1941), 572–74.

Analyzes the wartime increase of delinquency in normal and in mentally retarded children.

354. Layman, James W. "IQ Changes in Older-Age Children Placed for Foster Home Care," *Pedagogical Seminary and Journal of Genetic Psychology*, LX (March, 1942), 61–70.

A study of the changes in the intelligence quotients of children placed in foster homes.

Personality[3]

355. Abbate, Grace McLean. "Group Procedures Found Effective in the Prevention and Handling of Emotional

[1] See also Item 122 (Lippitt) in the list of selected references appearing in the March, 1943, number of the *Elementary School Journal* and Items 160 (Hurlock) and 195 (Bonney) in the April, 1943, number of the same journal.

[2] See also Item 186 (Hildreth) in the list of selected references appearing in the April, 1942, number of the *Elementary School Journal*.

[3] See also Items 244 (Durea and Fertman) and 314 (Street) in the list of selected references appearing in the May, 1942, number of the *Elementary School Journal* and Item 106 (Chittenden) in the March, 1943, number of the same journal.

Disorders," *Mental Hygiene*, XXVI (July, 1942), 394–409.

Evaluates the practices used by teachers in the United States and in England to prevent emotional disorders of children who are living under war conditions. Contains suggestions in regard to classroom practices and discusses attitudes toward children in the school as a whole.

356. ACKERSON, LUTON. *Children's Behavior Problems:* Vol. II, *Relative Importance and Interrelations among Traits.* Chicago: University of Chicago Press, 1942. Pp. xx+570.

Presents statistical analyses of the personality traits of 3,294 children who were examined at the Illinois Institute for Juvenile Research.

357. BROWN, FRED. "An Experimental Study of Parental Attitudes and Their Effects upon Child Adjustment," *American Journal of Orthopsychiatry*, XII (April, 1942), 224–30.

A study of the personality adjustment of children in relation to parental attitudes. Rating scales and personality inventories were filled out by pupils, teachers, and parents, and the results were compared with observations of the children's behavior.

358. CAVANAUGH, JEAN OGDEN. "The Relation of Recreation to Personality Adjustment," *Journal of Social Psychology*, XV (February, 1942), 63–74.

Reports a study of the relation between emotional and social adjustment and children's recreational activities.

359. CICCARELLI, EUGENE C. "Measures for the Prevention of Emotional Disorders," *Mental Hygiene*, XXVI (July, 1942), 383–93.

An evaluation of the personality and emotional problems of children, especially with reference to anxieties arising from the stresses of war.

360. FRENKEL-BRUNSWIK, ELSE. *Motivation and Behavior.* Genetic Psychology Monographs, Vol. XXVI, Second Half. Provincetown, Massachusetts: Journal Press, 1942. Pp. 121–265.

Reports a study of the drives of 150 pupils from Grade V through the high school and attempts to explain personality reactions in terms of the basic drives of the individual.

361. LEONARD, SHIRLEY. "The School's Role in Developing Morale," *Mental Hygiene*, XXVI (July, 1942), 445–54.

Evaluates the problems of emotional stability in children under war strain and discusses the functions of the teacher.

362. VERA, SISTER MARY. "A Critical Study of Certain Personality Factors as Determining Elements in a Remedial Reading Program," *Catholic Educational Review*, XL (March, 1942), 145–61.

A study of the relation between personality factors and effectiveness of remedial reading. Observations were also made of the relation between improvement in personality adjustment and improvement in reading.

Educational Writings

*

REVIEWS AND BOOK NOTES

THEORY AND PRACTICE IN DEMOCRATIC SCHOOL ADMINISTRATION.—That there is much room for improvement before our schools can be considered models of democracy is indicated by the accumulation of literature on democracy in the schools. A new book in the field[1] sets forth with clearness and self-assurance a great number of the shortcomings, particularly in administration. Unlike much of the writing in this field, this book gives definite suggestions of what the writers think should be done and of how it might be accomplished. This volume might well be considered a sort of handbook on the theory and practice of developing the advocated procedures.

The authors attempt to make clear the principles that must be followed by those who would like to further democracy in school administration. A philosophy of education in a democracy is given, in which one comprehensive aim, democratic socialization, is urged. An effort is made to show the place of individuation in the total process of socialization. The need for redirection of educational leadership is examined, and suggestions are made to indicate how this leadership may be made efficient as well as democratic. The authors' plan for a faculty organization which will give to every member of the staff optimum opportunity for creative work and development, as well as their description of plans in successful operation, will be found particularly rich in suggestions. Two chapters are devoted to the role of the teacher in administration and to techniques for helping him to take his proper place in the school organization. Pupil participation and adult participation are each given a chapter. Finally, some highly controversial questions are raised, although no attempt is made to supply answers. Opinions are given about the need for agreement on ultimate direction, about patterns of organization, about studies to be made, about changes in teacher education, and about probable changes in the social setting of education. The book ends with a list of "imperative considerations that cannot be avoided."

The volume is well written and admirably organized. The "Implications and Applications" at the close of each chapter, together with suggested activities and questions, are effective in provoking thought. The annotated bibliographies will be valuable to persons who wish to become acquainted with the literature on democracy in educational administration.

Some readers may think that the book shows too much of a crusading spirit to be objective. That some of the suggestions will be feasible in any great number of communities may be questioned. For example, more attention should have been given to the probable difficulty of carrying out some of these suggestions in schools with large pupil-teacher ratios. The book has a value to administrators in pointing out possible unrest in the educational ranks comparable in a degree to that found in industry. The writers have a commendable idealism in wishing to promote school organization designed to make teaching more challenging, more effective, and more satisfying to the classroom teacher.

[1] G. Robert Koopman, Alice Miel, and Paul J. Misner, *Democracy in School Administration*. New York: D. Appleton–Century Co., Inc., 1943. Pp. xvi+330. $2.25.

This book is replete with valuable suggestions. It can be re-read with profit and referred to from time to time as suggestions are needed.

PAUL GOSSARD

Public Schools
Bloomington, Illinois

A GUIDE TO MEASUREMENT AND EVALUATION IN SECONDARY EDUCATION.—As never before, the activities of American high schools must be scrutinized to determine the degree of efficiency with which the responsibilities placed on secondary education are being met. No school, no department, and no classroom teacher can hope to meet the exacting requirements of today without setting up clearly defined goals and using reliable quantitative methods and instruments for checking actual achievements against attainable standards.

In order to make the means of appraisal at the secondary-school level available to classroom teachers and students of education, Greene, Jorgensen, and Gerberich have written a volume[1] which not only presents the older concepts of the subject but also incorporates the more recent improvements in the field.

Twenty-eight well-written chapters fulfil the twofold purpose of the authors:

> (1) To interest the student of secondary education in the possibilities of measurement and evaluation in education, and (2) to stimulate the secondary-school teacher and supervisor to make more effective use of tests and other evaluative devices as integral parts of enlightened teaching practice [p. 7].

The first three chapters are devoted to the definition of tests and evaluation, to a discussion of the types of educational and mental tests, and to a history of the testing movement. Next the authors present nine criteria of a good examination. Chapters on standardized tests and their use in the classroom are followed by illuminating discussions of the preparation of oral and essay examinations and of the construction and use of informal objective tests. In the next three chapters the measurement of intelligence and the use of personality instruments are dealt with. After the treatments of guidance techniques and diagnosis and remedial instruction, ten chapters are devoted to measurement and remediation in particular subjects. Although the major emphasis of the volume has been placed on diagnosis and analytical testing, together with evaluation in the field of subject matter, a brief but informative chapter dealing with the place and the value of general-survey tests is included. Treatments of the statistical and the interpretive aspects of measurement open the way for consideration of the applications of a testing program to the needs of the school. The final chapter briefly summarizes the place of measurement in the work of the classroom teacher. To a beginner the usefulness of the volume is greatly enhanced by a glossary, fifteen pages in length, which clearly and concisely defines the more important technical words occurring throughout the work.

An outstanding characteristic of the book is the emphasis which is placed on practical applications. The importance of adjusting the contents of all instruments of measurement and evaluation to the specific objectives of the various subjects is stressed by the frequent inclusion of statements of such objectives, with examples of the types of tests best fitted to appraise the success with which the fundamental purposes have been attained. Another valuable contribution of the book is found in the distinction drawn between the functions of standardized tests and those of informal objective tests and the discussion of the unique values of each. In recognition of the fact that speed and accuracy in scoring are essential to the full use of all measuring instruments, the authors describe and illustrate the labor-saving features of

[1] Harry A. Greene, Albert N. Jorgensen, and J. Raymond Gerberich, *Measurement and Evaluation in the Secondary School*. New York: Longmans, Green & Co., 1943. Pp. xxvi+670. $3.75.

scoring keys, self-scoring tests, and machine-scoring devices. With a wider use of such devices, both standardized tests and informal objective tests should become more profitable and popular.

This volume is a distinct contribution to the literature of measurement and evaluation in secondary education. Not only will its thorough treatment of the subject be appreciated by the newcomer, but those workers long familiar with the field of measurement and evaluation will welcome its timely examples and practical suggestions.

CLIFFORD R. MADDOX

Thornton Township High School
Harvey, Illinois

SIGNIFICANCE OF DEMOCRATIZING THE CURRICULUM.—Building an adequate school curriculum has been one of the more important problems with which school authorities have been confronted. In addition to its importance, the curriculum is an issue over which there has been, and still is, the most lively and the most controversial discussion. The author of a recent book[1] has courageously presented a curriculum for a democratic school system and has given a prominent place in the making of the curriculum to those for whom it is made—the pupils. This book presents a challenge to those who consider that the curriculum should be prepared solely by "outside" agencies or by experts. It gives comfort and encouragement to those persons who are attempting to make the curriculum responsive to changing social forces and who have been attempting to reorganize the program to make the school a place where democracy is taught and practiced.

The treatise is a splendid example of the operation of logic in approaching the problem of curriculum-building for a democratic school such as the author visualizes. In Part I the author develops the theory that all education must be "lifelike." This section places emphasis on the community as the basis for building the curriculum, but it presents the idea that the classroom need not be unlike actual life experiences. Activities of various types are employed as evidence that the work of a schoolroom can be made practical.

As a means of "educating the whole child," the author proposes twelve areas, not as subjects, but for purposes of inventory. Instruction in any one area might appear at each grade level. The curriculum is conceived in terms of "broad fields" instead of "courses." Departmentalization as so commonly employed in secondary schools and colleges would handicap such development, but the author has a plan for bringing about "correlation" and "integration" even in a rigidly departmentalized system.

Again and again, emphasis is placed on the need for providing a section of the daily program and an area in the curriculum wherein pupils may not be expected to "strain" all the time to improve themselves. The author thinks that occasionally "doing what one likes to do" has great psychological value and should constitute an area of the curriculum.

The importance ascribed to education or training as compared with the influence of physical heredity may well be quoted:

> The author of this volume believes, on the basis of interpretation of the research data on hand, on the basis of analysis of the nature of intelligence, and on the basis of the apparent impossibility of hypothecating a neurological structure that could carry tendencies toward *techniques* of behavior by physical heredity, that perhaps 99 per cent of the variance in intelligence and in personality will be found attributable to factors within our potential control and only about 1 per cent to hereditary factors beyond our potential control [p. 141].

In Part II the author has brought together reports of experiences in democratic practices at all grade levels and in all subject fields. Reading this section will richly reward persons who are interested in finding examples of pupil-teacher planning in the build-

[1] Charles C. Peters, *The Curriculum of Democratic Education*. New York: McGraw-Hill Book Co., Inc., 1942. Pp. x+368. $2.75.

ing of a school curriculum. Some of these reports are from the author's experiences, whereas others are selected from educational literature. Modifications of socialized procedures from the first grade through the college, and even in out-of-school agencies, are presented from actual situations. In the final chapter of Part II, the author has brought together a list of selections from the educational literature in which philosophies on the school curriculum by some of our leading thinkers are set forth.

The third major division contains directions for inventorying social competencies. The author supplies "blueprints" of personal culture, of an optimum citizen, of physical efficiency, of domestic efficiency, of vocational efficiency, of social democracy, and of industrial democracy.

Students in teacher-training institutions and teachers in the field will find this book intensely challenging.

LOY NORRIX

Public Schools
Kalamazoo, Michigan

A SELECTION OF RECENT EDUCATIONAL WRITINGS.—Since 1929 the American schools have been confronted with a number of problem situations of such scope and intensity that the changes which marked the normal progress of educational procedures during the period were often obscured. In the earlier half of this period, decreasing revenues kept all school systems in confusion because of the uncertainty of the possession of the means for carrying on the services which their communities expected them to perform. As adjustments were gradually worked out and the financial position of the schools improved, the restricted opportunities for youth under changed economic conditions became the chief concern of educational institutions, until the outlook for both youth and the nation's economy was suddenly shifted by the war. Now the schools are almost completely absorbed in the problems arising from the necessity for directing human energies, to the highest possible degree, into channels which will prove productive in the prosecution of the war.

It is natural that in times of stress professional interest and public discussion should converge conspicuously on conditions and circumstances causing the extraordinary demands on the schools. Significant, however, is the fact that overt attention to the immediate effects and requirements of critical situations has merely overshadowed and has not displaced the continuing study and searching experimentation which in normal times connote progress in educational programs and procedures. The evidence of this fact is to be observed in the educational writings of any selected period in which the schools have been temporarily disturbed by strong shifts in the social and economic currents of community or national life. An example of the persistent concern of teachers and school administrators for the progress of education along normal lines, even in times of stress, is furnished by a collection[1] of writings from a monthly bulletin issued since 1929 by the School of Education of a midwestern state university.

This volume is composed of sixty articles written by members of the faculty of the University of Michigan. The selection of the articles to be published in book form was made on the basis of the permanent value of the contributions. The titles of the selected articles accordingly include such familiar topics as liberal versus specialized training, the long-time view of financial support, attitudes toward the progressive movement, the language arts, the social studies, character training, health, social hygiene, supervision of instruction, trends in commercial education, discipline, and coeducation in recreation. These and other topics discussed in the articles included in this book reflect the serious

[1] *Current Viewpoints in Education: A Series of Articles by Members of the Faculty.* Compiled by Claude Eggertsen and Warren R. Good. Ann Arbor, Michigan: Bureau of Educational Reference and Research, University of Michigan, 1942. Pp. vi+202.

interests of men and women engaged in training teachers for service in public and private schools. The subjects treated will be recognized as representative of the problems with which the profession has been concerned throughout the period over which these writings were distributed, despite the distractions of varying crises in school and national life.

The book provides a serviceable overview of modern concepts relating to a number of aspects of American education. It may be read with interest and profit by teachers and administrators in service as well as by teachers in training.

NELSON B. HENRY

University of Chicago

ENGLISH CAN BE FUN!—Mellie John, in her two books for study by high-school students in English classes,[1] has made a valuable contribution to the literature in this field. Her books show exceeding care in their preparation; they are complete in their treatment of the study of English; and they are written in a delightfully refreshing manner.

Natural English is divided into two parts, Part I embracing the correct forms of speaking, reading, and writing; Part II being devoted to the mechanics of writing. Care is taken throughout both books to emphasize the desirability of speaking and writing not only with correctness but with originality as well. For example, parts of speech are studied, but the presentation does not stop with an explanation of the correct use of each. Verbs and nouns, for instance, are discussed as "lively words," and the student may see how a careful choice of such words can enliven and add zest to his writing. Too often teachers have neglected this aspect in the study of English and, in so doing, have missed an excellent opportunity to interest pupils in enriching their modes of expression.

English for You is divided into three parts: "Oral Communication," "Written Communication," and "The Mechanics of Communication." As one may see, this classification is very flexible, and each phase of communication is treated throughout the book and is not confined to its principal section only. Careful and critical listening as one means of acquiring knowledge is also presented.

One of the most important features of the books is the stress which is placed on the necessity for correct oral and written English in all classes and in life outside of school. Miss John has challenged the erroneous but all too commonly accepted idea that correctness is needed only in the presence of the English teacher. She shows it to be a prerequisite to success everywhere, and, by so doing, she has made her books more meaningful to the student.

Both volumes show a tremendous amount of work on the part of the author. No aspect of the study of English which high-school students might need has been omitted. In addition to clarity and forcefulness of presentation, the books reflect a gift which is of equal value and which writers of English textbooks too often miss, namely, the ability to imbue with fresh ideas and amazing originality a subject which has been too frequently considered dull and uninteresting. Miss John's rare understanding of high-school pupils has enabled her to write with a lightness of touch and with strokes of humor which will delight them. Through these books she will help other teachers to transmit their enthusiasm for the study of English to their classes. Creative writing, the study of grammar, a lesson on the semicolon, or a study of social correspondence need no longer be a process wearisome to teacher and students alike. These books will insure to pupils a most enjoyable and stimulating experience as well as a complete and thorough study of English.

BABETTE LEMON

Laboratory Schools
University of Chicago

[1] Mellie John, *Natural English*, pp. 526, $1.40; *English for You*, pp. 592, $1.52. Evanston, Illinois: Row, Peterson & Co., 1943.

CURRENT PUBLICATIONS RECEIVED

METHOD, HISTORY, THEORY AND PRACTICE

CONANT, MARGARET M. *The Construction of a Diagnostic Reading Test: For Senior High School Students and College Freshmen.* Teachers College Contributions to Education, No. 861. New York: Teachers College, Columbia University, 1942. Pp. viii+156. $1.85.

FERNALD, GRACE M. *Remedial Techniques in Basic School Subjects.* New York: McGraw-Hill Book Co., Inc., 1943. Pp. xvi+350. $2.75.

HOLBROOK, SABRA. *Children Object.* New York: Viking Press, 1943. Pp. 198. $2.00.

LANGER, WALTER C. *Psychology and Human Living.* For the Commission on Human Relations, Progressive Education Association. New York: D. Appleton-Century Co., Inc., 1943. Pp. viii+286. $1.50.

LINDSAY, TULLYE BORDEN. *Provision for Continuity through the Selection of Curriculum Units: An Evaluation of One Aspect of Progressive Elementary School Practice.* A Thesis presented to the Faculty of the Department of Education, Yale University, in partial fulfilment of the requirements for the Degree of Doctor of Philosophy. State College, Mississippi: Tullye Borden Lindsay (Box 4), 1943. Pp. 112.

MORT, PAUL R. *Secondary Education as Public Policy.* The Inglis Lecture, 1943. Cambridge, Massachusetts: Harvard University Press, 1943. Pp. 86.

MURSELL, JAMES L. *Music in American Schools.* New York: Silver Burdett Co., 1943. Pp. vi+312. $2.60.

The Reference Function of the Library: Papers Presented before the Library Institute at the University of Chicago, June 29 to July 10, 1942. Edited by Pierce Butler, with a Foreword by Louis R. Wilson. University of Chicago Studies in Library Science. Chicago: University of Chicago Press, 1943. Pp. x+366. $3.00.

Thirty Schools Tell Their Story. Adventure in American Education, Vol. V. New York: Harper & Bros., 1943. Pp. xxiv+802. $4.00.

VICKERY, WILLIAM E., and COLE, STEWART G. *Intercultural Education in American Schools: Proposed Objectives and Methods.* Problems of Race and Culture in American Education, No. 1. New York: Harper & Bros., 1943. Pp. xviii+214. $2.00.

BOOKS FOR HIGH-SCHOOL TEACHERS AND PUPILS

CLARK, JOHN R., and SMITH, ROLLAND R., with the co-operation of RALEIGH SCHORLING. *Geometry in Aeronautics: Establishing a Fix, Interception, Wind Drift, Radius of Action.* A reprint of a new chapter from *Modern-School Geometry: Revised.* Yonkers-on-Hudson, New York: World Book Co., 1943. Pp. 439–56. $0.10.

EBY, GEORGE S., WAUGH, CHARLES L., WELCH, HERBERT E., and BUCKINGHAM, MAJOR BURDETTE H. *The Physical Sciences.* Boston: Ginn & Co., 1943. Pp. vi+492. $2.28.

GRUENBERG, BENJAMIN C., with the co-operation of ELLSWORTH S. OBOURN. Instructional Tests in Electricity: Thirteen unit tests covering the Pre-induction Course in Fundamentals of Electricity as recommended by the War Department. Yonkers-on-Hudson, New York: World Book Co., 1943. Pp. 32. $0.16 (each), $5.00 (per package of 50).

GRUENBERG, BENJAMIN C., with the co-operation of ELLSWORTH S. OBOURN. Instructional Tests in Machines: Fourteen unit tests covering the Pre-induction Course in Fundamentals of Machines as recommended by the War Department. Yonkers-on-Hudson, New York: World Book Co., 1943. Pp. 36. $0.16 (each), $5.00 (per package of 50).

LENNES, N. J. *A Second Course in Algebra.* New York: Macmillan Co., 1943 (revised). Pp. xiv+522. $1.80.

MOORE, L. E. *Elementary Avigation.* Boston: D. C. Heath & Co., 1943. Pp. viii+222. $1.60.

SEYMOUR, F. EUGENE, and SMITH, PAUL JAMES. *Solid Geometry.* New York: Macmillan Co., 1943. Pp. viii+264. $1.60.

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BODDE, DERK. *China's Gifts to the West.* Prepared for the Committee on Asiatic Studies in American Education. Asiatic Studies in American Education, No. 1. Washington: American Council on Education, 1942. Pp. vi+40. $0.35.

CLUGSTON, KATE. *Cotton or School.* Based on a Field Study by Charles E. Gibbons. Publication No. 387. New York: National Child Labor Committee (419 Fourth Avenue), 1943. Pp. 32. $0.25.

Gold Star List of American Fiction, 1943. Syracuse, New York: Syracuse Public Library, 1943. Pp. 40. $0.35.

"A Guide for Construction and Revision of Curricula." Passaic, New Jersey: Passaic Public Schools. Pp. 12 (mimeographed). $0.50.

Methods of Research and Appraisal in Education. Review of Educational Research, Vol. XII, No. 5. Washington: American Educational Research Association, 1942. Pp. 455–596. $1.00.

RUFSVOLD, MARGARET I. *World War Information: An Annotated List of Current Books and Pamphlets for Teachers, Students, and Adult Discussion Groups.* Bulletin of the School of Education, Indiana University, Vol. XIX, No. 1. Bloomington, Indiana: Bureau of Co-operative Research and Field Service, Indiana University, 1943. Pp. 130. $0.50.

SCOTT, CLARICE L., and HAGOOD, ANNE F. *Mending Men's Suits.* Miscellaneous Publication No. 482. Washington: United States Department of Agriculture, 1943. Pp. 24. $0.10.

Wartime Handbook for Education. Washington: National Education Association, 1943. Pp. 64. $0.15.

UNITED STATES OFFICE OF EDUCATION:

Handbook on Education and the War. Based on Proceedings of the National Institute on Education and the War, Sponsored by the U.S. Office of Education, Wartime Commission, at American University, Washington, D.C., August 29 through 31, 1942. Pp. xvi+344. $0.55.

Leaflet No. 64, 1942—*Planning Schools for Tomorrow: The Issues Involved* by John Guy Fowlkes, with the co-operation of the Committee on Planning for Education of the U.S. Office of Education. Pp. viii+26. $0.10.

Vocational Division Bulletin No. 223, Occupational Information and Guidance Series, No. 10, 1942—*Community Occupational Surveys* by Marguerite Wykoff Zapoleon. Pp. viii+200. $0.25.

Vocational Division, Occupational Information and Guidance Service, Misc. 3035, 1943—"Wartime Jobs in Marine Corps Aviation for Enlisted Personnel" by Franklin R. Zeran. Pp. 7 (mimeographed).

Vocational Division, Occupational Information and Guidance Service, Misc. 3038, 1943—"Techniques of Follow-up Study of School-leavers" by Royce E. Brewster and Franklin R. Zeran. Pp. 9 (mimeographed).